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Physical therapy personal protective screen apparatus, method and kit

Abstract

A physical therapy protective screen apparatus for providing safety and privacy for persons being treated on a physical therapy table. The physical therapy protective screen apparatus includes a planar rigid barrier held in place by at least a first attachment member on a physical therapy table.

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Background/Summary

CROSS-REFERENCE(S) TO RELATED APPLICATION(S) (1) This application claims priority to U.S. Provisional Patent Application No. 63/219,724 entitled “EXER-GUARD PHYSICAL THERAPY PERSONAL PROTECTIVE SCREEN” filed on Jul. 8, 2021, the entirety of which is incorporated herein by reference.

FIELD

(1) This disclosure relates to the field of physical therapy tables and physical therapy mats. More particularly, this disclosure relates to a protective screen apparatus for use in conjunction with a physical therapy table or mat.

BACKGROUND

(2) Physical therapy services are often carried out with a patient resting on a physical therapy table which often includes a padded mat. Some physical therapy tables are large enough to hold multiple persons. Because patients can be located so close together in such settings, there is a danger that one patient could easily transfer a pathogen to a second patient such as, for example, a viral disease or bacterial disease. There is also often a desire by patients to have privacy during exercises and associated treatment. What is needed, therefore, is a way to better protect physical therapy patients who are in close proximity to one another and to provide privacy to such patients, particularly when such patients are sharing a physical therapy table.

SUMMARY

(3) The above and other needs are met by a physical therapy protective screen apparatus configured for use on a physical therapy table, the physical therapy protective screen apparatus comprising a first planar rigid barrier; and a first attachment member including a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier fits securely between the first pair of parallel vertical holders. When in use, the physical therapy protective screen apparatus further comprises the first attachment member resting on a physical therapy table. The first attachment member preferably further comprises a first securing member extending through one of the vertical holders of the first pair of vertical holders to secure the first planar rigid barrier to the first attachment member.

(4) The physical therapy protective screen apparatus may further comprise a second planar rigid barrier; and a second attachment member including a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the second planar rigid barrier fits securely between the second pair of parallel vertical holders. The second attachment member preferably further comprises a second securing member extending through one of the vertical holders of the second pair of vertical holders to secure the second planar rigid barrier to the second attachment member.

(5) In some embodiments, the second attachment member further comprises a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the first base plate, the first side attachment member further comprising a first side attachment member first section configured to extend around a first outer edge of a physical therapy table when the first base plate is located proximate to a first edge of said physical therapy table; and a first side attachment member second section comprising a first U-shaped bracket configured to fit at least partially around a first portion of a base frame of said physical therapy table. The first side attachment member second section preferably includes a first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side attachment member to said first portion of said base frame of said physical therapy table. The first securing component preferably comprises a first threaded tightening bolt which can be screwed inward or outward through a first threaded aperture along the first side of the first U-shaped bracket.

(6) The physical therapy protective screen apparatus may further include a third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier fits securely between the third pair of parallel vertical holders; a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the

third base plate is located proximate to a second edge of said physical therapy table; and a second side attachment member second section comprising a U-shaped bracket configured to fit at least partially around a second portion of a base frame of said physical therapy table. The second side attachment member second section preferably includes a second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said first portion of said base frame of said physical therapy table. The second securing component preferably comprises a second threaded tightening bolt which can be screwed inward or outward through a second threaded aperture along the first side of the second U-shaped bracket. The first attachment member preferably further comprises a second securing member extending through one of the vertical holders of the first pair of vertical holders to secure the second planar rigid barrier to the first attachment member.

(7) In another aspect, embodiments of the disclosure provide a method for physically screening patients on a physical therapy table, the method comprising placing a first attachment member along an upper surface of a physical therapy table, the first attachment member comprising a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of a first planar rigid barrier can fit securely between the first pair of parallel vertical holders; and securing the first planar rigid barrier to the first attachment member by inserting the lower portion of the first planar rigid barrier between the first pair of vertical parallel holders. The step of the securing the first planar rigid barrier to the first attachment member preferably further comprises adjusting a first securing member in the first attachment member to secure the first planar rigid barrier to the first securing member.

(8) The method may further include placing a second attachment member along said upper surface of said physical therapy table, the second attachment member comprising a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of a second planar rigid barrier can fit securely between the second pair of parallel vertical holders; and securing the second planar rigid barrier to the second attachment member by inserting the lower portion of the second planar rigid barrier between the second pair of vertical parallel holders. The step of the securing the second planar rigid barrier to the second attachment member preferably further comprises adjusting a second securing member in the second attachment member to secure the second planar rigid barrier to the second securing member.

(9) In some embodiments, the step of placing the second attachment member along an upper surface of a physical therapy table further comprises engaging a first U-shaped bracket of the second attachment member with a first portion of a base frame of said physical therapy table, wherein the second attachment member further comprises a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further comprising (i) a first side attachment member first section configured to extend around a first outer edge of said physical therapy table when the first base plate is located proximate to a first edge of said physical therapy table and (ii) a first side attachment member second section comprising the first U-shaped bracket configured to fit at least partially around said first portion of said base frame of said physical therapy table; and placing the second base plate proximate to said first edge of said physical therapy table. The step of placing the second attachment member along an upper surface of a physical therapy table may further comprise adjusting a first securing component wherein the second attachment member comprises the first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side attachment member to said first portion of said base frame of said physical therapy table.

(10) The method embodiments described above may further include placing a third attachment member along an upper surface of said physical therapy table, the third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit securely between the third pair of parallel vertical holders; engaging a second U-shaped bracket of the third attachment member with a second portion of said base frame of said physical therapy table, wherein the third attachment member further comprises a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising (i) a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the third base plate is located proximate to a second edge of said physical therapy table and (ii) a second side attachment member second section comprising the second U-shaped bracket configured to fit at least partially around said second portion of said base frame of said physical therapy table; placing the third base plate proximate to said second edge of said physical therapy table; and securing the first planar rigid barrier to the third attachment member by inserting the lower portion of the first planar rigid barrier between the third pair of vertical parallel holders. The step of placing a third attachment member along an upper surface of a physical therapy table may further comprise adjusting a second securing component wherein the third attachment member comprises the second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said second portion of said base frame of said physical therapy table.

(11) In another aspect, embodiments of the disclosure provide a kit for a physical therapy protective screen apparatus, the kit comprising a first planar rigid barrier; and a first attachment member including a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit securely between the first pair of parallel vertical holders.

(12) The kit may further comprise a second planar rigid barrier; and a second attachment member including a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the second planar rigid barrier can fit securely between the second pair of parallel vertical holders.

(13) The second attachment member may further comprise a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further comprising a first side attachment member first section configured to extend around a first outer edge of a physical therapy table when the first base plate is located proximate to a first edge of said physical therapy table; and a first side attachment member second section comprising a first U-shaped bracket configured to fit at least partially around a first portion of a base frame of said physical therapy table.

(14) The kit may further comprise a third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit securely between the third pair of parallel vertical holders, the third attachment member further comprising a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the third base plate is located proximate to a second edge of said physical therapy table; and a second side

attachment member second section comprising a U-shaped bracket configured to fit at least partially around a second portion of a base frame of said physical therapy table; wherein the first side attachment member second section includes a first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side attachment member to said first portion of said base frame of said physical therapy table; and wherein the second side attachment member second section includes a second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said first portion of said base frame of said physical therapy table.

(15) The first attachment member may further comprise a first securing member extending through one of the vertical holders of the first pair of vertical holders to secure the first planar rigid barrier to the first attachment member, and a second securing member extending through one of the vertical holders of the first pair of vertical holders to secure the second planar rigid barrier to the first attachment member.

(16) The summary provided herein is intended to provide examples of particular disclosed embodiments and is not intended to cover all potential embodiments or combinations of embodiments. Therefore, this summary is not intended to limit the scope of the invention disclosure in any way, a function which is reserved for the appended claims.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

(1) Further features, aspects, and advantages of the present disclosure will become better understood by reference to the following detailed description, appended claims, and accompanying figures, wherein elements are not to scale so as to more clearly show the details, wherein like reference numbers indicate like elements throughout the several views, and wherein:

(2) FIG. 1 shows a perspective view of a first embodiment of a physical therapy protective screen apparatus including a first planar rigid barrier and a first attachment member;

(3) FIG. 2 a perspective view of a second embodiment of a physical therapy protective screen apparatus including the first planar rigid barrier, the first attachment member, a second planar rigid barrier, and a second attachment member;

(4) FIG. 3 shows a close-up perspective view of the first attachment member shown in FIG. 1 and FIG. 2;

(5) FIG. 4 shows an end view of the first attachment member shown in FIG. 1 and FIG. 2;

(6) FIG. 5 shows a close-up perspective view of the second attachment member shown in FIG. 2;

(7) FIG. 6 shows an end view of the second attachment member shown in FIG. 2 and FIG. 5;

(8) FIG. 7 shows a perspective view of a physical therapy protective screen apparatus including a first planar rigid barrier, a second planar rigid barrier, a first attachment member, a second attachment member, and a third attachment member.

(9) FIG. 8 shows another perspective view of the physical therapy protective screen apparatus shown in FIG. 7, wherein the view in FIG. 8 shows the second attachment member attached to a physical therapy table;

(10) FIG. 9 shows yet another perspective view of the physical therapy protective screen apparatus shown in FIG. 7 and FIG. 8, wherein the view in FIG. 9 shows the third attachment member attached to said physical therapy table.

(11) FIG. 10 shows a side view of the second attachment member shown in FIG. 7 and FIG. 8;

(12) FIG. 11 shows another side view of the second attachment member shown in FIG. 10 wherein

the second attachment member has been rotated 90 degrees along a vertical axis;
(13) FIG. 12 shows a side view of the third attachment member shown in FIG. 7 and FIG. 9;
(14) FIG. 13 shows another side view of the third attachment member shown in FIG. 12 wherein the third attachment member has been rotated 90 degrees along a vertical axis.
(15) FIG. 14 shows a first embodiment of a method for physically screening patients on a physical therapy table using a physical protective screen apparatus; and
(16) FIG. 15 shows a second embodiment of a method for physically screening patients on a physical therapy table using a physical protective screen apparatus.
(17) The figures are provided to illustrate concepts of the invention disclosure and are not intended to embody all potential embodiments of the invention. Therefore, the figures are not intended to limit the scope of the invention disclosure in any way, a function which is reserved for the appended claims.

DETAILED DESCRIPTION

(18) Various terms used herein are intended to have particular meanings. Some of these terms are defined below for the purpose of clarity. The definitions given below are meant to cover all forms of the words being defined (e.g., singular, plural, present tense, past tense). If the definition of any term below diverges from the commonly understood and/or dictionary definition of such term, the definitions below control. In the claims, the term “said” is used in conjunction with a term that already has an antecedent basis but that is not being claimed as part of the invention.

(19) A physical therapy protective screen apparatus is disclosed, the apparatus including a planar rigid barrier, a first attachment member, and a second attachment member. The physical therapy protective screen apparatus is used in conjunction with a physical therapy table. The physical therapy screen apparatus provides a barrier between persons being treated on the physical therapy table. The barrier is useful to minimize the spread of disease as well as to provide privacy in embodiments in which the barrier is opaque or translucent. Currently, large physical therapy tables are used which can fit multiple patients at a time but with no barrier of any kind between the patients. What is needed is a physical screening device to physically separate patients for the health and privacy.

(20) FIG. 1 shows a first embodiment of a physical therapy protective screen apparatus **100** including a first planar rigid barrier **102A** and a first attachment member **104A**. The barrier **102** can be transparent, translucent, or opaque. When privacy is a concern, translucent or opaque barriers are preferred. The barrier can be made of various materials including metal, metal alloy, plastic, wood, polymer-based materials, and composite materials. In a preferred embodiment, the barrier **102** is made of polymethyl methacrylate (plexiglass). Barrier **102** size can vary in different contemplated embodiments, but in one preferred embodiment, a 2-foot-high 4-foot-wide barrier is used. In a related embodiment, two of these sized barriers are used together to extend a length of about 8 feet on a physical therapy table as shown in FIG. 2 which also shows a second planar rigid barrier **102B** and a second attachment member **104B**. The barriers **102** preferably have a thickness of about 0.22 inches, but other thicknesses are contemplated. In a preferred embodiment, the barriers **102** can include one or more gripping handles **108** attached thereto wherein the gripping handles **108** are preferably made of rubber. The gripping handles **108** may be attached to the barriers using an adhesive or other means of attachment known to persons having ordinary skill in the art.

(21) The first attachment member **104A**, shown up close in FIGS. 3-4, preferably includes a first base plate **110** and a first pair of parallel vertical holders **112** extending up perpendicularly from the first base plate **110**. In a preferred embodiment, the first base plate **110** is welded to the first pair of vertical holders **112**. In an alternative embodiment, the first base plate **110** and the first pair of vertical holders **112** are formed as a single piece by metal or plastic molding techniques known to persons having ordinary skill in the art. The first pair of vertical holders **112** includes a first pair first holder **112A** and a first pair second holder **112B**. The first pair of parallel vertical holders **112**

are spaced apart such that a lower portion **114A** of the first planar rigid barrier **102A** fits securely between the first pair of parallel vertical holders **112**. Preferably, enough space is present between the first pair of parallel vertical holders **112** such that the first planar rigid barrier **102A** can be slid into place between the first pair first holder **112A** and the first pair second holder **112B**. Preferably, the first attachment member **104A** includes a first securing member **116** which extends through the first pair first holder **112A** to further secure the first planar rigid barrier **102A** to the first attachment member **104A**. In one embodiment, the first securing member **116** may include a first threaded bolt **118A** including a first plastic knob **120A** wherein the first threaded bolt **118A** extends through a first threaded aperture **122A** through the first pair first holder **112A**. The first securing member **116** may further include a second threaded bolt **118B** including a second plastic knob **120B** wherein the second threaded bolt **118B** extends through a second threaded aperture **122B** through the first pair second holder **112B**. Preferably, the first pair of parallel vertical holders **112** are layered with padding such as, for example a layer of rubber or a layer of felt. The purpose of the padding is to protect the first planar rigid barrier **102A** when it is being secured inside the first pair of vertical holders **112** and to provide a snugger fit. The length of the first base plate **110** is preferably about 11 inches and the width of the first base plate **110** is preferably about 5 inches. In this context, “about” is defined as plus or minus 2 inches. However, these dimensions are preferred dimensions, and this disclosure is not intended to be limited by the preferred ranges of length. The first attachment member **104A** is preferably made of metal or metal alloy, but other materials are contemplated including wood, plastic, composite materials, and rubber.

(22) The second attachment member **104B**, shown in FIGS. 5-6, preferably includes a second base plate **124** and a second pair of parallel vertical holders **126** extending up perpendicularly from the second base plate **124**. In a preferred embodiment, the second base plate **124** is welded to the second pair of vertical holders **126**. In an alternative embodiment, the second base plate **124** and the second pair of vertical holders **126** are formed as a single piece by metal or plastic molding techniques known to persons having ordinary skill in the art. The second pair of vertical holders **126** includes a second pair first holder **126A** and a second pair second holder **126B**. The second pair of parallel vertical holders **126** are spaced apart such that a lower portion **114B** of the second planar rigid barrier **102B** fits securely between the second pair of parallel vertical holders **126**. Preferably, enough space is present between the second pair of parallel vertical holders **126** such that the second planar rigid barrier **102B** can be slid into place between the second pair first holder **126A** and the second pair second holder **126B**. Preferably, the second attachment member **104B** includes a second securing member **128** which extends through the second pair first holder **126A** to further secure the second planar rigid barrier **102B** to the second attachment member **104B**. In one embodiment, the second securing member **128** may include a third threaded bolt **130A** including a third plastic knob **132A** wherein the third threaded bolt **130A** extends through a third threaded aperture **134A** through the second pair first holder **126A**. The second securing member **128** may further include a fourth threaded bolt **130B** including a fourth plastic knob **132B** wherein the fourth threaded bolt **130B** extends through a fourth threaded aperture **134B** through the second pair second holder **126B**. Preferably, the second pair of parallel vertical holders **126** are layered with padding such as, for example a layer of rubber or a layer of felt. The purpose of the padding is to protect the second planar rigid barrier **102B** when it is being secured inside the second pair of vertical holders **126** and to provide a snugger fit. The length of the second base plate **124** is preferably about 11 inches and the width of the first base plate **124** is preferably about 5 inches. In this context, “about” is defined as plus or minus 2 inches. However, these dimensions are preferred dimensions, and this disclosure is not intended to be limited by the preferred ranges of length. The second attachment member **104B** is preferably made of metal or metal alloy, but other materials are contemplated including wood, plastic, composite materials, and rubber.

(23) In the embodiment shown in FIG. 2, the first attachment member **104A** and the second attachment member **104B** rest on an upper surface **136** of a physical therapy table **138**. The first

attachment member **104A** and the second attachment member **104B** are preferably positioned so that the physical therapy protective screen apparatus **100** bisects said surface **136** of said physical therapy table **138**. The first attachment member **104A** and the second attachment member **104B** can be placed on said upper surface **136** of said physical therapy table **138** before attaching the first planar rigid barrier **102A** and the second planar rigid barrier **102B**, or, alternatively, the first planar rigid barrier **102A** and the second planar rigid barrier **102B** can be attached to the first attachment member **104A** and the second attachment member **104B**, respectively, before the physical therapy protective screen apparatus **100** is placed on said upper surface **136** of said physical therapy table **138**.

(24) FIG. 7 shows another embodiment of a physical therapy protective screen apparatus **200** including the first planar rigid barrier **102A**, the second planar rigid barrier **102B**, a first attachment member **204** very similar to the first attachment member **104A**, a second attachment member **206A**, and a third attachment member **206B**. One difference with this embodiment is that at the second attachment member **206A** wraps around a first edge **208** of a physical therapy table **210** and wraps around and attaches to a first portion **212** of a base frame of said physical therapy table **210** as shown in FIG. 8. Additionally, the third attachment member **206B** wraps around a second edge **214** of said physical therapy table **210** and wraps around and attaches to a second portion of said base frame **216** of said physical therapy table **210** as shown in FIG. 9.

(25) The first attachment member **204** is very similar to the first attachment member **104A** because the first attachment member **204** also includes the first base plate **110** and the first pair of vertical holders **112**. The main difference between the first attachment member **104A** and the first attachment member **204** is that, in addition to the first securing member **116** (shown as **217A** in FIG. 7), the first attachment member **204** further includes a second securing member **217B**. The first securing member **217A** is used to secure a lower portion **114A** of the first planar rigid barrier **102A** to the first securing member **204**. The second securing member **217B** is used to secure a lower portion **114B** of the second planar rigid barrier **102B** to the first attachment member **204**.

(26) FIG. 10 shows a side view of the second attachment member **206A** which includes a first side attachment member **218** wherein a first end **220** of the first side attachment member **218** is hingedly attached to a first end **222** of a second base plate **224** via a first hinge joint **226**. The first side attachment member **218** further includes a first side attachment member first section **228** configured to extend around said first edge **208** of said physical therapy table **210** when the second base plate **224** is located proximate to said first edge **208** of said physical therapy table **210**. The first side attachment member **218** further includes a first side attachment member second section **230** including a first U-shaped bracket **232** configured to fit at least partially around said first portion of said base frame **212** of said physical therapy table **210**. The first side attachment member **218** preferably includes a first lateral section **234** providing some distance for the first side attachment member **218** to extend around said first edge **208** of said physical therapy table **210**. The first side attachment member second section **230** preferably includes a first securing component **236** located along a first side **238** of the first U-shaped bracket **232** wherein the first securing component **236** can be adjusted to exert pressure against said first portion of said base frame **212** of said physical therapy table **210** to secure the first side attachment member **218** to said first portion of said base frame **212** of said physical therapy table **210**. The first securing component **236** preferably includes a first threaded tightening bolt **240** which can be screwed inward or outward through a first threaded aperture **242** along the first side **238** of the first U-shaped bracket **232**.

(27) FIG. 11 shows a side view of the third attachment member **206B** which includes a second side attachment member **244** wherein a first end **246** of the second side attachment member **244** is hingedly attached to a first end **248** of a third base plate **250** via a second hinge joint **252**. The second side attachment member **244** further includes a second side attachment member first section **254** configured to extend around said second edge **214** of said physical therapy table **210** when the

third base plate **250** is located proximate to said second edge **214** of said physical therapy table **210**. The second side attachment member **244** further includes a second side attachment member second section **256** including a second U-shaped bracket **258** configured to fit at least partially around said second portion of said base frame **216** of said physical therapy table **210**. The second side attachment member **244** preferably includes a second lateral section **260** providing some distance for the second side attachment member **244** to extend around said second edge **214** of said physical therapy table **210**. The second side attachment member second section **256** preferably includes a second securing component **262** located along a first side **264** of the second U-shaped bracket **258** wherein the second securing component **262** can be adjusted to exert pressure against said second portion of said base frame **216** of said physical therapy table **210** to secure the second side attachment member **244** to said second portion of said base frame **216** of said physical therapy table **210**. The second securing component **262** preferably includes a second threaded tightening bolt **266** which can be screwed inward or outward through a second threaded aperture **268** along the first side **264** of the second U-shaped bracket **258**.

(28) As with the first attachment member **204**, the second attachment member **206A** further includes a second pair of parallel vertical holders **270** extending up perpendicularly from the second base plate **224**. The second pair of vertical holders **270** includes a second pair first holder **270A** and a second pair second holder **270B**. The second pair of parallel vertical holders **270** are spaced apart such that the lower portion **114B** of the second planar rigid barrier **102B** fits securely between the second pair of parallel vertical holders **270**. Preferably, enough space is present between the second pair of parallel vertical holders **270** such that the second planar rigid barrier **102B** can be slid into place between the second pair first holder **270A** and the second pair second holder **270B**. Preferably, the second attachment member **206A** includes a first securing member **272** which extends through the second pair first holder **270A** to further secure the second planar rigid barrier **102B** to the second attachment member **206A**. In one embodiment, the first securing member **272** may include a threaded bolt **274** including a plastic knob **276** wherein the bolt **274** extends through a threaded aperture **278** through the second pair first holder **270A**.

(29) The third attachment member **206B** further includes a third pair of parallel vertical holders **280** extending up perpendicularly from the second base plate **250**. The third pair of vertical holders **280** includes a third pair first holder **280A** and a third pair second holder **280B**. The third pair of parallel vertical holders **280** are spaced apart such that the lower portion **114A** of the first planar rigid barrier **102A** fits securely between the third pair of parallel vertical holders **280**. Preferably, enough space is present between the third pair of parallel vertical holders **280** such that the first planar rigid barrier **102A** can be slid into place between the third pair first holder **280A** and the third pair second holder **280B**. Preferably, the third attachment member **206B** includes a second securing member **282** which extends through the third pair first holder **280A** to further secure the first planar rigid barrier **102A** to the third attachment member **206B**. In one embodiment, the second securing member **282** may include a threaded bolt **284** including a plastic knob **286** wherein the bolt **284** extends through a threaded aperture **288** through the third pair first holder **280A**.

(30) Although three different embodiments of a physical therapy protective screen apparatus are provided above, the attachment members could be used in different combinations. For example, a physical therapy protective screen apparatus might employ the first attach member **104** shown FIG. **1** and the third attachment member **206B** shown in FIG. **9**.

(31) In addition to the apparatuses described above, methods for physically screening patients on a physical therapy table using a physical protective screen apparatus are also disclosed as shown in FIGS. **14-15**. A first general method includes **300** placing a first attachment member along an upper surface of a physical therapy table, the first attachment member comprising a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of a first planar rigid barrier can fit securely between the first pair of parallel vertical holders; **302**

placing a second attachment member along said upper surface of said physical therapy table, the second attachment member comprising a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a second lower portion of the planar rigid barrier can fit securely between the second pair of parallel vertical holders; **304** securing the first planar rigid barrier to the first attachment member by inserting the lower portion of the rigid planar barrier between the first pair of vertical parallel holders; and **306** securing the second planar rigid barrier to the second attachment member by inserting the lower portion of the rigid planar barrier between the second pair of vertical parallel holders. In one embodiment, only steps **300** and **304** apply and no second attachment member or second planar rigid barrier are used. The steps in the embodiments described above do not have to occur in the order in which they are numbered. For example, the first planar rigid barrier can be attached to the first attachment member before the first attachment member is placed on said upper surface of said physical therapy table.

(32) In a related embodiment, the securing step **304** may further include **308** adjusting a first securing member in the first attachment member to secure the first planar rigid barrier to the first securing member; and **310** adjusting a second securing member in the second attachment member to secure the second planar rigid barrier to the second securing member.

(33) In a related embodiment, the step of **302** placing the second attachment member along an upper surface of a physical therapy table may further include **400A** engaging a first U-shaped bracket of the second attachment member with a first portion of a base frame of said physical therapy table, wherein the second attachment member further includes a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further including (i) a first side attachment member first section configured to extend around a first outer edge of said physical therapy table when the first base plate is located proximate to a first edge of said physical therapy table and (ii) a first side attachment member second section comprising the first U-shaped bracket configured to fit at least partially around said first portion of said base frame of said physical therapy table; and **400B** placing the second base plate proximate to said first edge of said physical therapy table. An additional step may include **402** placing a third attachment member along said upper surface of said physical therapy table, the third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that the lower portion of the first planar rigid barrier can fit securely between the third pair of parallel vertical holders. The step of placing the third attachment member along an upper surface of a physical therapy table may further include **402A** engaging a second U-shaped bracket of the third attachment member with a second portion of said base frame of said physical therapy table, wherein the third attachment member further comprises a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further including (i) a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the second base plate is located proximate to a second edge of said physical therapy table and (ii) a second side attachment member second section comprising the second U-shaped bracket configured to fit at least partially around said second portion of said base frame of said physical therapy table; and **402B** placing the third base plate proximate to said second edge of said physical therapy table. Additional steps preferably include **404** securing the first attachment member and the second attachment member to the second planar rigid barrier; and **406** securing the first attachment member and the third attachment member to the first planar rigid barrier.

(34) In addition to the apparatuses and methods described above, a first kit including the first planar rigid barrier **102A** and the first attachment member **104A** is disclosed. Additionally, a second kit including the first planar rigid barrier **102A**, the second planar rigid barrier **102B**, the first

attachment member **104A**, and the second attachment member **104B** is disclosed. A third kit includes the first planar rigid barrier **102A**, the first attachment member **204**, and the second attachment member **206A**. Finally, a fourth kit including the first planar rigid barrier **102A**, the second planar rigid barrier **102B**, the first attachment member **204**, the second attachment member **206A**, and the third attachment member **206B** is disclosed.

(35) The various embodiments of this disclosure can be used with various types of physical therapy tables to provide a sturdy physical screen between patients. An advantage of this technology includes the fact that it can be retrofitted onto pre-existing physical therapy tables. The apparatus embodiments can be easily assembled and disassembled as needed. The embodiments described herein provide a safer and more private exercise experience for patients who are utilizing double therapeutic mat tables. The presence of the screen comforts patients in providing a physical barrier to prevent the spread of disease while also, in some embodiments, providing privacy. Exercising individuals have increased breathing and are likely to sweat, talk, laugh, and cough in close proximity to other patients, thereby increasing the likelihood of spreading pathogens. Embodiments described herein help maximize a physical therapy clinic's space and physical therapy table usage while simultaneously reducing the risk of the spread of pathogens. The embodiments further provide privacy to patients. When the physical therapy protective screen apparatus **200** is not in use, the first planar rigid barrier **102A**, the second planar rigid barrier **102B**, and the first attachment member **204** can be removed. However, the second attachment member **206A** and the third attachment member **206B** can remain attached to said physical therapy table **210** by, for example, rotating second base plate **224** off the physical therapy table **210** by using the first hinge joint **226**. The same procedure can be used with the third attachment member **206B**. Edges of various components described herein can be rounded off to prevent injury. Components can be covered with padded covers while not in use to provide additional safety.

(36) The foregoing description of preferred embodiments of the present disclosure has been presented for purposes of illustration and description. The described preferred embodiments are not intended to be exhaustive or to limit the scope of the disclosure to the precise form(s) disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiments are chosen and described in an effort to provide the best illustrations of the principles of the disclosure and its practical application, and to thereby enable one of ordinary skill in the art to utilize the concepts revealed in the disclosure in various embodiments and with various modifications as are suited to the particular use contemplated. All such modifications and variations are within the scope of the disclosure as determined by the appended claims when interpreted in accordance with the breadth to which they are fairly, legally, and equitably entitled.

(37) Any element in a claim that does not explicitly state “means for” performing a specified function, or “step for” performing a specific function, is not to be interpreted as a “means” or “step” clause as specified in 35 U.S.C. § 112, ¶ 6. In particular, the use of “step of” in the claims herein is not intended to invoke the provisions of 35 U.S.C. § 112, ¶ 6.

Claims

1. A physical therapy protective screen apparatus configured for use on a physical therapy table, the physical therapy protective screen apparatus comprising: a first planar rigid barrier; and a second planar rigid barrier; a first attachment member including a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier fits between the first pair of parallel vertical holders; and a second attachment member including a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the second planar rigid barrier fits

between the second pair of parallel vertical holders, wherein the second attachment member further comprises: a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further comprising: a first side attachment member first section configured to extend around a first outer edge of a physical therapy table when the second base plate is located proximate to a first edge of said physical therapy table; and a first side attachment member second section comprising a first U-shaped bracket configured to fit at least partially around a first portion of a base frame of said physical therapy table.

2. The physical therapy protective screen apparatus of claim 1 further comprising: a third attachment member comprising: a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier fits between the third pair of parallel vertical holders; a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising: a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the third base plate is located proximate to a second edge of said physical therapy table; and a second side attachment member second section comprising a second U-shaped bracket configured to fit at least partially around a second portion of a base frame of said physical therapy table.

3. The physical therapy protective screen apparatus of claim 2 wherein the second side attachment member second section includes a second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said first portion of said base frame of said physical therapy table.

4. The physical therapy protective screen apparatus of claim 3 wherein the second securing component comprises a second threaded tightening bolt which can be screwed inward or outward through a second threaded aperture along the first side of the second U-shaped bracket.

5. The physical therapy protective screen apparatus of claim 1 wherein the first side attachment member second section includes a first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side attachment member to said first portion of said base frame of said physical therapy table.

6. The physical therapy protective screen apparatus of claim 5 wherein the first securing component comprises a first threaded tightening bolt which can be screwed inward or outward through a first threaded aperture along the first side of the first U-shaped bracket.

7. The physical therapy protective screen of claim 1 wherein the first attachment member further comprises a first securing member extending through one of the vertical holders of the first pair of vertical holders to secure the first planar rigid barrier to the first attachment member.

8. The physical therapy protective screen of claim 7 wherein the first attachment member further comprises a second securing member extending through one of the vertical holders of the first pair of vertical holders to secure the second planar rigid barrier to the first attachment member.

9. The physical therapy protective screen apparatus of claim 1 further comprising the first attachment member resting on a physical therapy table.

10. A method for physically screening patients on a physical therapy table, the method comprising: placing a first attachment member along an upper surface of a physical therapy table, the first attachment member comprising a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of a first planar rigid barrier can fit between the first pair of parallel vertical holders; and securing the first planar rigid barrier to the first attachment member by inserting the lower portion of the first planar rigid barrier between the

first pair of vertical parallel holders; placing a second attachment member along said upper surface of said physical therapy table, the second attachment member comprising a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of a second planar rigid barrier can fit between the second pair of parallel vertical holders; and securing the second planar rigid barrier to the second attachment member by inserting the lower portion of the second planar rigid barrier between the second pair of vertical parallel holders, wherein the placing the second attachment member along an upper surface of a physical therapy table further comprises: engaging a first U-shaped bracket of the second attachment member with a first portion of a base frame of said physical therapy table, wherein the second attachment member further comprises a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further comprising (i) a first side attachment member first section configured to extend around a first outer edge of said physical therapy table when the second base plate is located proximate to a first edge of said physical therapy table and (ii) a first side attachment member second section comprising the first U-shaped bracket configured to fit at least partially around said first portion of said base frame of said physical therapy table; and placing the second base plate proximate to said first edge of said physical therapy table.

11. The method of claim 10 further comprising: placing a third attachment member along an upper surface of said physical therapy table, the third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit between the third pair of parallel vertical holders; engaging a second U-shaped bracket of the third attachment member with a second portion of said base frame of said physical therapy table, wherein the third attachment member further comprises a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising (i) a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the third base plate is located proximate to a second edge of said physical therapy table and (ii) a second side attachment member second section comprising the second U-shaped bracket configured to fit at least partially around said second portion of said base frame of said physical therapy table; placing the third base plate proximate to said second edge of said physical therapy table; and securing the first planar rigid barrier to the third attachment member by inserting the lower portion of the first planar rigid barrier between the third pair of vertical parallel holders.

12. The method of claim 11 wherein the placing a third attachment member along an upper surface of a physical therapy table further comprises adjusting a second securing component wherein the third attachment member comprises the second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said second portion of said base frame of said physical therapy table.

13. The method of claim 10 wherein the securing the first planar rigid barrier to the first attachment member by inserting the lower portion of the first planar rigid barrier between the first pair of vertical parallel holders further comprises adjusting a first securing member in the first attachment member to secure the first planar rigid barrier to the first securing member.

14. The method of claim 10 wherein the placing the second attachment member along an upper surface of a physical therapy table further comprises adjusting a first securing component wherein the second attachment member comprises the first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side

attachment member to said first portion of said base frame of said physical therapy table.

15. A kit for a physical therapy protective screen apparatus, the kit comprising: a first planar rigid barrier; and a second planar rigid barrier; a first attachment member including a first base plate and a first pair of parallel vertical holders extending up perpendicularly from the first base plate, the first pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit between the first pair of parallel vertical holders; and a second attachment member including a second base plate and a second pair of parallel vertical holders extending up perpendicularly from the second base plate, the second pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the second planar rigid barrier can fit between the second pair of parallel vertical holders, wherein the second attachment member further comprises: a first side attachment member wherein a first end of the first side attachment member is hingedly attached to a first end of the second base plate, the first side attachment member further comprising: a first side attachment member first section configured to extend around a first outer edge of a physical therapy table when the second base plate is located proximate to a first edge of said physical therapy table; and a first side attachment member second section comprising a first U-shaped bracket configured to fit at least partially around a first portion of a base frame of said physical therapy table.

16. The kit of claim 15 further comprising: a third attachment member comprising a third base plate and a third pair of parallel vertical holders extending up perpendicularly from the third base plate, the third pair of parallel vertical holders being spaced apart in a configuration such that a lower portion of the first planar rigid barrier can fit between the third pair of parallel vertical holders, the third attachment member further comprising a second side attachment member wherein a first end of the second side attachment member is hingedly attached to a first end of the third base plate, the second side attachment member further comprising: a second side attachment member first section configured to extend around a second outer edge of said physical therapy table when the third base plate is located proximate to a second edge of said physical therapy table; and a second side attachment member second section comprising a second U-shaped bracket configured to fit at least partially around a second portion of a base frame of said physical therapy table; wherein the first side attachment member second section includes a first securing component located along a first side of the first U-shaped bracket wherein the first securing component can be adjusted to exert pressure against said first portion of said base frame of said physical therapy table to secure the first side attachment member to said first portion of said base frame of said physical therapy table; and wherein the second side attachment member second section includes a second securing component located along a first side of the second U-shaped bracket wherein the second securing component can be adjusted to exert pressure against said second portion of said base frame of said physical therapy table to secure the second side attachment member to said first portion of said base frame of said physical therapy table.

17. The kit of claim 16 wherein: the first attachment member further comprises a first securing member extending through one of the vertical holders of the first pair of vertical holders to secure the first planar rigid barrier to the first attachment member, and a second securing member extending through one of the vertical holders of the first pair of vertical holders to secure the second planar rigid barrier to the first attachment member.
