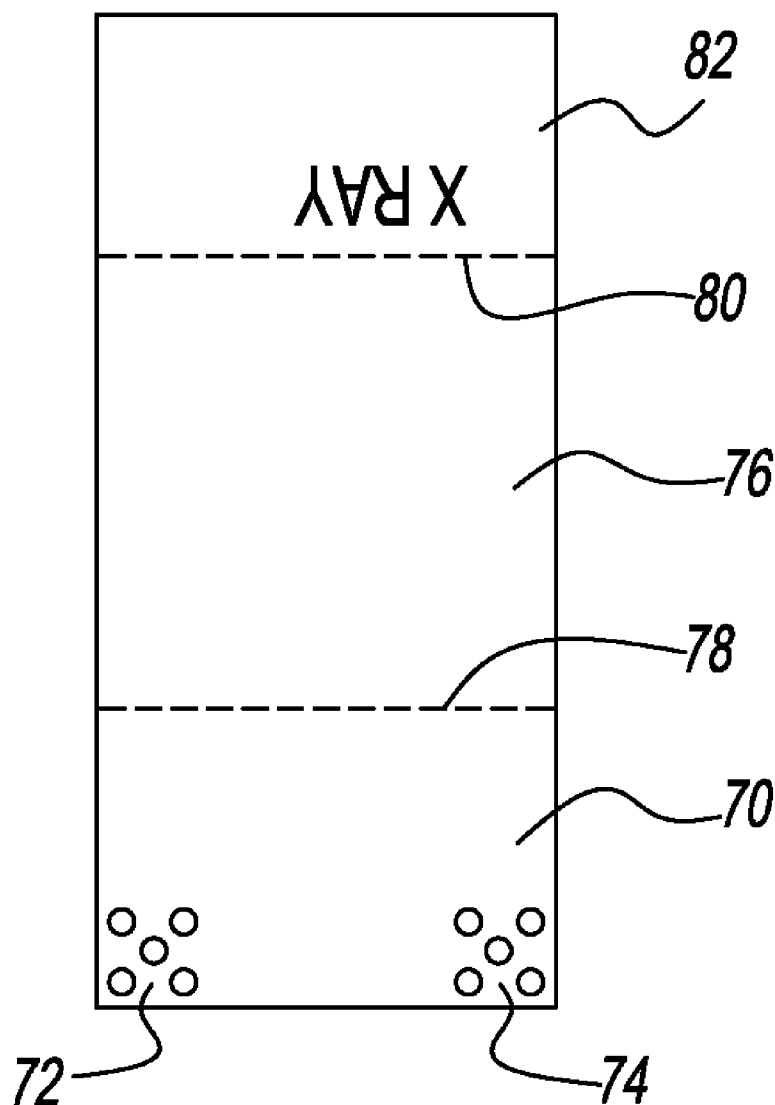




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(19) **United States**(12) **Patent Application Publication**
Bessert(10) **Pub. No.: US 2012/0019031 A1**(43) **Pub. Date: Jan. 26, 2012**(54) **WHEELCHAIR COVER**(52) **U.S. Cl. 297/219.1**(76) **Inventor: Gregory Robert Bessert, Houston, TX (US)**(57) **ABSTRACT**(21) **Appl. No.: 12/841,167**(22) **Filed: Jul. 21, 2010**

A cover for a wheelchair seat located between left and right handle bars of the wheelchair where the cover has a seat portion with a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair and twice the distance from the top of the wheelchair handle bars down to the wheelchair seat. A first set of openings is located at the left front of the seat portion for receiving the left handle bar of the wheelchair; and a second set of openings is located at the right front of the seat portion for receiving the right handle bar of the wheelchair.

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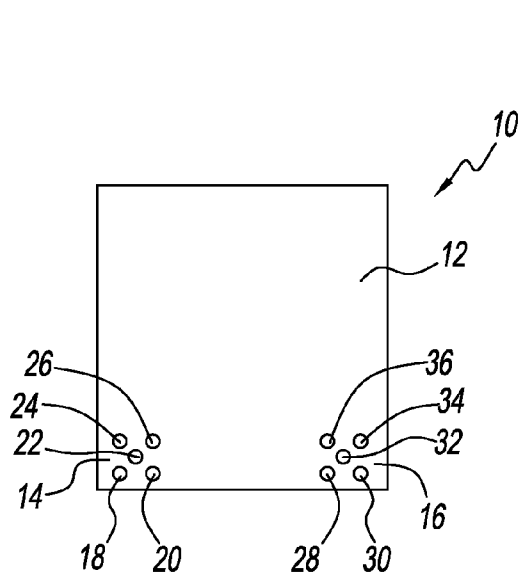


FIG. 1

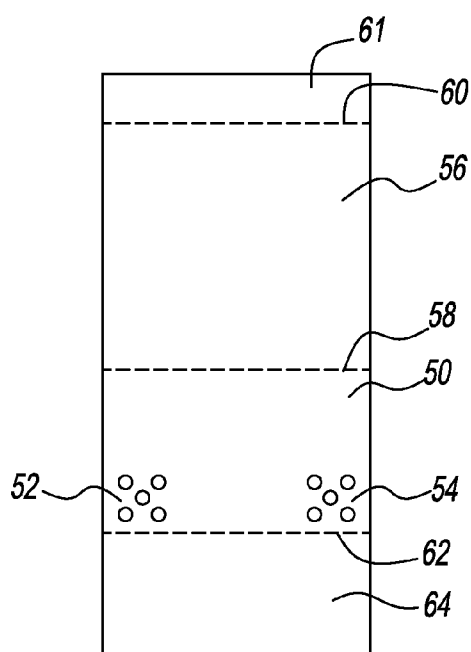


FIG. 3

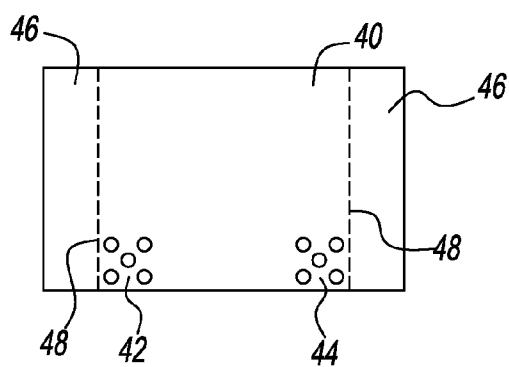


FIG. 2

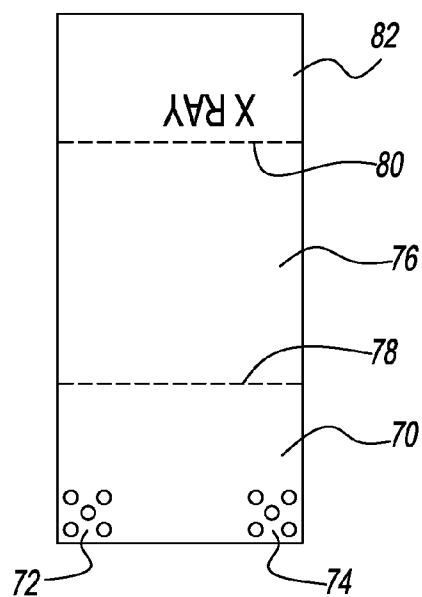


FIG. 4

WHEELCHAIR COVER

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a biodegradable and recyclable cover for a wheel chair which can be discarded and replaced with a new cover each time the wheelchair is used.

[0003] 2. Description of Related Art

[0004] Covers for covering wheelchairs are known in the prior art. More specifically, by way of example, U.S. PreGrant Publication No. 2008/0047071 to Christofferson, et al, discloses a seat cover which minimizes surface tension in the cover material when the cover conforms to a highly contoured shape.

[0005] U.S. PreGrant Publication No. 2004/0041449 to Bluhm discloses a wheelchair slipcover which has a seat pad slipcover that can contain a cushion. The seat pad slipcover can be made from decorative material and can be attached to the seat of a wheelchair. A back pad slipcover can also be made from the same or different decorative material, and can be attached to the back of the wheelchair.

[0006] U.S. Pat. No. 7,278,649 to Daniels discloses a wheelchair cover having a first and a second covering member. The first covering member has a back cover portion which covers a back of a wheelchair, and first and second arm covering portions for covering first and second arms which extend from the back of the wheelchair. The second covering member, is removably attached to the first covering member and has a seat covering portion for covering a seat of the wheelchair. The wheelchair cover further includes a third covering member which covers a cushion placed on the seat. First and second side skirts extend from the first and second arm covering portions cover the first and second side of the wheelchair and a back skirt extending from the back covering portion covers a wheelchair back side. A front skirt covers the wheelchair front side.

[0007] U.S. Pat. No. 6,866,337 to Lash discloses a protective cover for a wheelchair which includes a first cover section and a second cover section. The first and second cover sections form a contiguous unit having a first surface and a second surface. The protective cover wraps around either a seat or back of the wheelchair so that the first and second cover sections reside on opposite sides of the seat or the back. Fastening elements detachably couple a fourth edge of the second cover section with a first edge of a first cover section to form a closed loop around the seat or the back. The protective cover may optionally include cushions for occupant comfort.

[0008] U.S. Pat. No. 6,312,051 to Adams discloses a cover for a wheelchair seat made from a cloth having a first ply of wicking material for drawing moisture that contacts the first ply away from an occupant of the wheelchair and a second ply of absorbent material for drawing moisture out of the first ply and dispersing the drawn moisture in the second ply. The first and second plies are permanently secured in laminar relationship to each other by a hem along their perimeter. The cloth is detachably mounted on the wheelchair seat, either by an elastic band positioned within the hem, where the band has a length in its unstretched state which is less than the length of the hem, or by a plurality of hook-and-loop fasteners fixed in spaced apart relationship to the cloth and which extend outwardly from the hem to a plurality of mating hook-and-loop fasteners fixed to the cloth near the hem. A third ply of impermeable material for preventing moisture from passing from the second ply into contact with the wheelchair surface may be disposed against the opposite side of the second ply as

the first ply with all the plies being secured in laminar relationship with each other by the hem.

[0009] U.S. Pat. No. 5,568,660 to Raburn, et al. discloses a soft pressure relieving cushion for wheelchair patients made of a high density foam, such as 2.4 pounds per cubic foot or above and a 25 percent ILD characteristic of at least about 50 pounds, together with independently acting cube shaped segments. The segments have predetermined respective separation and rounded upper edges with a predetermined radius of curvature which is larger about the periphery of the wheelchair pad. A relatively lowered pad thickness of about 3 inches facilitates patient movement onto and off from a wheelchair cushion. A removable covering of laminated materials is stretchable so as to slide over the rounded edges of the segments and down into separations therebetween to maintain independent action of such segments during use with the covering. An upper layer of the covering comprises a base layer of woven fabric of elastic synthetic fibers. A lower layer of the covering comprises a water resistant coating of urethane generally at least about 1 mil thick.

[0010] U.S. Pat. No. 5,333,921 to Dinsmoor, III discloses an adjustable cover and seating system for a wheelchair. The cover has an enclosing portion surrounding the inner seat members and a skirt portion extending about the sides of the enclosure portion and downwardly under the lower section of the enclosure portion. The enclosure portion of the cover can be placed over the seating members and secured in place by a zipper to encase the seating member. The skirt section is then pulled to draw the skirt section downwardly which, in turn, draws the upper section of the enclosure portion snugly across the top of the seating members. In doing so, the peripheral side section of the enclosure portion is also drawn downwardly on itself into bunches which are held firmly in place against the seating members by the skirt section. This serves to prevent excess material from catching in the spokes of the wheelchair.

[0011] U.S. Pat. No. 5,170,826 to Carstensen, et al. discloses a cover for a wheelchair having a hood portion. The hood portion has an upper end and at least two sides extending from the upper end. The sides define an opening opposite the upper end for a person to enter. A flap member extends from a first side of the hood portion which is adapted to be wrapped across a portion of the opening.

[0012] U.S. Pat. No. 5,168,889 to Diestel discloses a removable and storable weather and sun covering for a wheelchair. Two embodiments include a soft cover version which can be dismantled and stowed in a container on the wheelchair and a hard top version which can be easily removed and stored when not needed. Common to both covers is a cover support clamp bracket suited for securing a variety of covers and cover frames to the frame of a wheelchair. The cover support clamp bracket can be left on the wheelchair even when not in use or removed when not needed.

[0013] U.S. Pat. No. 5,121,938 to Gross, et al. discloses a slip cover for a wheelchair. The wheelchair includes a seat back which has a front and rear surface as well as first and second vertical posts located between the front and rear surfaces. The wheelchair slip cover includes an elongated member having an anterior portion that is received over the front surface of the seat back, and a posterior portion received over the rear surface of the seat back. The anterior and posterior portions merge at an intermediate portion which is received over the upper side of the seat back. A first connecting member extends from the elongated member and is wrapped about the first post of the seat back. A second connecting member also extends from the elongated member, and is wrapped about the second post of the seat back.

[0014] U.S. Pat. No. 4,693,289 to Taylor, et al. discloses a protective wheelchair cover into which a wheelchair is easily introduced, and methods of using same during the transportation or storage of a wheelchair. The cover provides a complete enclosure into which a wheelchair can be easily rolled.

SUMMARY OF THE INVENTION

[0015] In an exemplary embodiment of the present invention, there is disclosed a cover for a wheelchair seat located between left and right handle bars of the wheelchair comprising:

[0016] a seat portion for covering the seat of the wheelchair having a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair and twice the distance from the top of the wheelchair handle bars down to the wheelchair seat;

[0017] a first set of openings located at the left front of the seat portion for receiving the left handle bar of the wheelchair; and

[0018] a second set of openings located at the right front of the seat portion for receiving the left handle bar of the wheelchair.

[0019] In another embodiment of the present invention, there is disclosed a method of covering a wheelchair seat located between left and right handle bars of the wheelchair comprises:

[0020] providing a seat portion for covering the seat of the wheelchair having a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair and twice the distance from the top of the wheelchair handle bars down to the wheelchair seat;

[0021] providing a first set of openings located at the left front of the seat portion for receiving the left handle bar of the wheelchair; and

[0022] a second set of openings located at the right front of the seat portion for receiving the left handle bar of the wheelchair.

[0023] The more important features of the invention have thus been outlined in order that the more detailed description that follows may be better understood and in order that the present contribution to the art may better be appreciated. Additional features of the invention will be described hereinafter and will form the subject matter of the claims that follow.

[0024] Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0025] As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

[0026] The foregoing has outlined, rather broadly, the preferred feature of the present invention so that those skilled in the art may better understand the detailed description of the invention that follows. Additional features of the invention

will be described hereinafter that form the subject of the claims of the invention. Those skilled in the art should appreciate that they can readily use the disclosed conception and specific embodiment as a basis for designing or modifying other structures for carrying out the same purposes of the present invention and that such other structures do not depart from the spirit and scope of the invention in its broadest form.

BRIEF DESCRIPTION OF THE DRAWINGS

[0027] Other aspects, features, and advantages of the present invention will become more fully apparent from the following detailed description, the appended claim, and the accompanying drawings in which similar elements are given similar reference numerals.

[0028] FIG. 1 is a plan view of a cover for use on a wheelchair;

[0029] FIG. 2 is a plan view of another embodiment of a cover for use on a wheelchair;

[0030] FIG. 3 is a plan view of another embodiment of a cover for use on a wheelchair; and

[0031] FIG. 4 is a plan view of another embodiment of a cover for use on a wheelchair;

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0032] This invention relates to a slip cover for use with a wheelchair seat and seat back. At the present time wheelchairs are provided for short term use of an hour, more or less, by an individual, or they are rented for use by an individual for a few weeks or months, or they are purchased outright.

[0033] A wheel chair is provided for short term use to help move a person from one location to another at, for example, a hospital to transport a person from his/her hospital room to a waiting car or taxi at the front door of the hospital. In other instances a wheelchair will be used to move a patient from his/her room to another floor in a hospital for a medical procedure such as an Xray. In still another instance a wheel chair may be used to help move an incoming patient from a taxi to an emergency room or the admittance desk of the hospital. In other instances it is common to use a wheelchair at airport terminals to help transport an elderly passenger from his/her car or taxi to the boarding gate of a departing airplane.

[0034] More extensive but temporary use of a wheelchair is where a person suffers a temporary injury such as a badly sprained or broken foot or leg. In this instance the person will rent a wheelchair for a few weeks or months for use only while at home and will rely on crutches when going out to work, to a restaurant, etc. In other situations the wheelchair is owned by the individual and is used either for short periods of time each day or continuously by the owner.

[0035] Thus, wheelchairs that are used in hospitals, at airport terminals, in nursing homes and even wheelchairs that are rented for an extended period of time or owned by a person can present a sanitary problem by not being thoroughly cleaned and/or sanitized between use by different users. Where the wheel chair is rented or owned and used by a single person, it should be cleaned at least once a week. The present invention discloses a new improved cover which provides a simple and economical way of maintaining wheelchairs in a clean and sanitary condition.

[0036] Referring to FIG. 1, there is shown a plan view of a cover 10 for use on the seat of a wheelchair. The cover 10 is an elongated, substantially rectangular member that includes a seat portion 12 having two sets or more of similar openings at its lower end. One or more sets of openings 14 is located at the

lower left corner of seat portion **12** and the second set of openings **16** is located at the lower right corner of seat portion **12**. Seat portion **12** can have a width of about 32 inches, more or less and a length of about 40 inches, more or less and can be made of paper of any desired grade or of a plastic which can be coated or impregnated with an antimicrobial agent, and the seat cover can be of any desired color.

[0037] Referring to the openings in the lower left hand corner of the seat portion **12**, each set of openings **14** has five individual opening **18, 20, 22, 24** and **26** where each opening has a diameter of between one half of an inch and six inches, more or less. The openings in set **16** in the lower right hand corner of seat portion **12** has five individual openings **28, 30, 32, 34** and **36** which are a mirror image of the openings in set **14** and each opening has a diameter of about two inches, more or less. Openings **18, 20** of set **14** are aligned with openings **28, 30** of set **16** along a straight line where the center of opening **18** is about two inches in from the left end of the seat portion. The center of opening **20** is about three inches from the center of opening **18**, the centers of openings **20, 28** are about twenty inches from each other, and the center of opening **30** is about three inches from the center of opening **28**. The center of each opening **18, 20, 28** and **30** is located about two and one-half inches from the bottom edge of seat portion **12**.

[0038] Opening **22** of set **14** is aligned with opening **32** of set **16** and their centers are about two and three-quarters of an inch above the centers of openings **18, 20, 28** and **30**. The center of opening **22** is located about one inch to five inches in from the left edge of seat portion **12** and the center of opening **32** is about twenty four inches from the center of opening **22**.

[0039] Openings **24, 26** of set **14** are aligned with openings **36, 34** of set **16** along a straight line where the center of opening **24** is about one inch in from the left end of the seat portion. The center of opening **26** is about three inches to the right of the center of opening **24**, where the centers of openings **26, 36** are about twenty two inches from each other, and the center of opening **34** is about three inches from the center of opening **36**. The center of openings **24, 26, 36** and **34** are located about two and three-quarter inches above the centers of openings **22, 32**. The seat portion **12** can be of any biodegradable and recycled material where the material can be cloth, paper, plastic or a combination of these which can be coated or impregnated with an antimicrobial agent.

[0040] In another embodiment of the invention, in place of each opening in set **14, 16**, seat portion **12** can have a horizontal slit, a vertical slit, or a horizontal slit bisected with a centrally located vertical slit.

[0041] In another embodiment of the invention, in place of each opening in the sets **14, 16**, seat portion **12** can have push out openings or precut openings which are formed by pushing out two inch diameter perforated paper circles located on the seat portion **12**. In this embodiment an opening is obtained by pushing or tearing along the circle of perforations in the seat portion where an opening is desired.

[0042] To use, a person stands behind a wheelchair, places the seat portion **12** on top of the handle bars of the wheelchair and slides the handle bars through aligned openings of the sets of openings **14, 16**. The seat portion has a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair plus twice the distance from the top of the handle bars down to the wheelchair seat. After the handle bars are slid through the openings of the sets of openings, the seat portion is pressed

down along the insides of the handle bars and onto the seat of the wheelchair to provide a U shaped channel for a person to sit in.

[0043] In another embodiment the openings in each set of openings **14, 16** can be square, triangular, spherical, rectangular or have some other desired shape.

[0044] Referring to FIG. 2, there is shown a plan view of another embodiment of a cover for use with a wheelchair where the seat portion has two wings. In the embodiment of FIG. 2 seat portion **40** is similar to the seat portion **12** of FIG. 1 including the two sets of openings **42** and **44** where set of openings **42** is similar to set of openings **14** and set of openings **44** is similar to set of openings **16**. Extending out along each side of the seat portion **40** is a wing portion **46** where the seat portion is separated from the wing portion with dotted line **48**. Dotted line **48** indicates where the seat portion is to be folded when it is placed on a wheel chair. In this embodiment, after the seat portion is placed on a wheelchair and pressed down to conform to the wheelchair seat, each wing portion is folded down along dotted line **48** to cover the outside of each handle bar.

[0045] In another embodiment of the invention, a tape or a pressure sensitive adhesive (not shown) which is covered with a protective release tape is located at each bottom corner of the seat portion. The pressure sensitive adhesive is provided to form a closed end cover for the arm rails by sealing the ends of the cover that extend beyond the ends of the arm rail. Located at each bottom corner of the seat portion and wing portion **46** is a pressure sensitive adhesive which can have a width of about one inch and a length which extends from each set of openings **42, 44** to the side edges of the wing portions. In use, after the seat portion **40** is placed on a wheel chair and each wing portion **46** is folded down and covers the outside of each arm rail, the release tape is removed from the pressure sensitive adhesive and the ends of the wing portions at the ends of the arm rails are pinched together to provide arm rail covers that have closed ends.

[0046] Referring to FIG. 3, there is shown a plan view of another embodiment of a cover for use with a wheelchair where the seat portion has a back fold over portion for the back of the seat and a drop down leg portion. In the embodiment of FIG. 3 the seat portion **50** is similar to the seat portion **12** of FIG. 1 including the two sets of openings **52** and **54** where the set of openings **52** is similar to the set of openings **14** and the set of openings **54** is similar to the set of openings **16**. Extending out along the top of seat portion **50** is a fold over portion **56** for the back of the wheelchair seat. Dotted fold line **58** indicates where the seat portion is to be folded to provide the seat back portion **56** when it is placed on a wheel chair and dotted fold line **60** indicates where a second fold is made to locate an end **61** of the seat back portion around the top of the wheelchair back to hold the seat back portion on the back of the wheelchair seat. A third dotted fold line **62** indicates where the seat portion is to be folded to provide a drop down leg portion **64**. In this embodiment, after the seat panel is placed on a wheelchair and pressed down to conform to the wheelchair seat, a fold is made along dotted fold line **58** to provide a cover for the wheelchair seat back and another fold is made along dotted fold line **60** to form a flap portion that fits over the top of the wheelchair back to hold the cover **56** against the back of the wheelchair. Thereafter a third fold is made along dotted fold line **62** to form a drop down leg portion **64** to prevent the legs of a person in the wheelchair from touching the frame of the wheelchair.

[0047] Referring to FIG. 4, there is shown a plan view of another embodiment of a cover for use with a wheelchair where the seat portion has a fold over cover for the back of the

seat and a drop down destination indicator. In the embodiment of FIG. 4 the seat portion 70 is similar to the seat portion 12 of FIG. 1 including the two sets of openings 72 and 74 where the set of openings 72 is similar to the set of openings 14 and the set of openings 74 is similar to the set of openings 16. Extending out along the top of seat portion 70 is a fold over cover portion 76 for the back of the wheelchair seat. Dotted fold line 78 indicates where the seat portion is to be folded to provide the seat back portion when it is placed on a wheel chair and dotted fold line 80 indicates where a second fold is made to locate an end 82 of the seat back portion around the top of the wheelchair back and down along the back of the wheelchair back for use as a destination indicator such as a sign which shows where the person in the wheelchair is to be taken. For example, when used in a hospital, the sign on the drop down indicator can read "X RAY" to insure that the person in the wheelchair is taken to the correct location. In another example, when the invention is used at an airport to take a passenger to a specific airline, the name of the airline such as "AMERICAN" can be printed on the drop down destination indicator.

[0048] In this embodiment, after the seat panel is placed on a wheelchair and pressed down to conform to the wheelchair seat, a fold is made along dotted line 78 to provide a cover for the wheelchair seat back and another fold is made along dotted line 80 to form the dropdown destination indicator 82 on the back of the wheelchair.

[0049] While there have been shown and described and pointed out the fundamental novel features of the invention as applied to the preferred embodiments, it will be understood that the foregoing is considered as illustrative only of the principles of the invention and not intended to be exhaustive or to limit the invention to the precise forms disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiments discussed were chosen and described to provide the best illustration of the principles of the invention and its practical application to enable one of ordinary skill in the art to utilize the invention 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 invention as determined by the appended claims when interpreted in accordance with the breadth to which they are entitled.

What is claimed is:

1. A cover for a wheelchair seat located between left and right handle bars of the wheelchair comprising:

- a seat portion for covering the seat of the wheelchair having a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair and twice the distance from the top of the wheelchair handle bars down to the wheelchair seat;
- a first set of openings located at the left front of the seat portion for receiving the left handle bar of the wheelchair; and
- a second set of openings located at the right front of the seat portion for receiving the left handle bar of the wheelchair.

2. The cover of claim 1 wherein the first and second sets of openings are randomly located at the right and left front of the seat portion.

3. The cover of claim 2 wherein the seat portion is made of biodegradable and recycled material.

4. The cover of claim 3 wherein the seat portion is made of paper or combination laminates.

5. The cover of claim 3 wherein the seat portion is made of plastic or combination laminates.

6. The cover of claim 3 wherein the first and second sets of openings are circular.

7. The cover of claim 3 wherein the first and second sets of openings are square.

8. The cover of claim 3 wherein the first and second sets of openings are rectangular.

9. The cover of claim 3 wherein the first and second sets of openings are circular.

10. The cover of claim 3 wherein the first and second sets of openings are push out perforated circles.

11. The cover of claim 3 wherein the openings of each set of openings are randomly located.

12. The cover of claim 3 wherein the locations of the openings in the first set of openings are mirror images of the locations of the openings in the second set of openings.

13. The cover of claim 3 wherein wings are located on each side of the seat portion for folding over the left and right handle bars of the wheelchair.

14. The cover of claim 3 wherein the seat portion is colored.

15. The cover of claim 3 wherein a seat back portion is attached to the back of the seat portion to provide a cover for the back of the wheelchair and a flap portion is attached to the seat back portion that fits over the top of the wheelchair back to hold the seat back portion against the back of the wheelchair.

16. The cover of claim 15 wherein the flap portion has a distinctive color or a sign to indicate the destination of a person in the wheelchair.

17. The cover of claim 3 wherein the seat portion is coated or impregnated with an antimicrobial agent.

18. A method of covering a wheelchair seat located between left and right handle bars of the wheelchair comprises:

providing a seat portion for covering the seat of the wheelchair having a front to back dimension which is at least equal to the depth of the seat of the wheelchair and a side to side width dimension which is at least equal to the width of the seat of the wheelchair and twice the distance from the top of the wheelchair handle bars down to the wheelchair seat;

providing a first set of openings located at the left front of the seat portion for receiving the left handle bar of the wheelchair; and

a second set of openings located at the right front of the seat portion for receiving the left handle bar of the wheelchair.

19. The method of claim 18 wherein the first and second sets of openings are randomly located at the right and left front of the seat portion.

20. The method of claim 19 wherein the seat portion is made of biodegradable and recycled material.

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