CHAIR WITH URINAL DEVICE

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ABSTRACT

A urinal chair includes a chair body and a urinal device. The chair body has a seat supporting frame defining an open seat area. The urinal device includes a top open drain pan, a cushion, a container and a cleaning device. The drain pan is supportably mounted upon the seat supporting frame of the chair body to fit in the open seat area of the chair body. The drain pan is slanted to drain toward a drainage aperture therein. The cushion is fit over the drain pan and defines a hole to permit drainage through the cushion to the drain pan. The container is disposed under the drain pan to collect liquid from the drain pan. Moreover, the cleaning device includes a cistern and a spout connected to the cistern. The spout is directed toward the drain pan for cleaning the drain pan with water stored in the cistern.
CHAIR WITH URINAL DEVICE

BACKGROUND OF THE INVENTION

[0001] Field of the Invention

[0002] The present invention relates to a urinal chair, and more particularly to such chair which may be used by a chair ridden person without aid from any nurse or other attendant.

[0003] Description of the Related Art

[0004] Urination is a serious matter for spine-injured-patients, incontinent patients, elderly people and convalescents undergoing rehabilitation who must use wheel-chairs or special-purpose chairs for a long period of time in their daily lives. However, little consideration has been taken so far for any urine-collecting means useful for the above-mentioned patients and people in their wheel-chairs or special-purpose chairs.

[0005] U.S. Pat. No. 3,383,713 discloses a urinal chair that is specifically designated for senile patients who are continually wetting or urinating with little or no control in which the chair is provided with a comfortable cushion that is constructed to drain toward a center aperture in the cushion and in which the cushion is supported by a pan-like seat that is also provided with a drainage aperture to permit drainage through the drainage aperture and in which a container is affixed under the seat to collect and prevent the spread of urine. However, since the center aperture in the cushion is aligned with the drainage aperture in the pan-like seat, the pan-like seat would stink after a short time of use, which is quite unpleasant to the user.

SUMMARY OF THE INVENTION

[0006] It is an object of this invention to provide a urinal chair for senile patients. It is a further object of this invention to provide a urinal chair that is provided with means to drain all urine into a sanitary container and maintain the urinal device as clean as feasible.

[0007] To achieve the foregoing object, the urinal chair includes a chair body and a urinal device mounted on the chair body. The chair body has a seat supporting frame defining an open seat area. The urinal device generally includes a top open drain pan, a cushion, a container and a cleaning device. The drain pan is supportably mounted upon the seat supporting frame of the chair body to fit in the open seat area of the chair body. In addition, the drain pan is slanted to drain toward a drainage aperture therein. The cushion is fit over the drain pan and defines a through hole from top to bottom to permit drainage through the cushion to the drain pan. The container is affixed under the drain pan and has an opening in communication with the drainage aperture of the drain pan for collection of liquid from the drain pan. The cleaning device includes a cistern and at least one spout that is connected to the cistern and directed toward the drain pan.

[0008] Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of a urinal chair in accordance with a first embodiment of the present invention;

[0010] FIG. 2 is an exploded perspective view of the urinal chair shown in FIG. 1;

[0011] FIG. 3 is another perspective view of the urinal chair in FIG. 1, except that a cushion is removed to show the interior of the chair;

[0012] FIG. 4 is a side view of the urinal chair of FIG. 1, partially cut away, to show the drainage of liquid;

[0013] FIG. 5 is another side view of the urinal chair of FIG. 1, partially cut away, to show a cleaning process;

[0014] FIG. 6 is a side view of a urinal chair in accordance with a second embodiment of the present invention; and

[0015] FIG. 7 is a side view of a urinal chair in accordance with a third embodiment of the present invention.

DETAILED DESCRIPTION OF EMBODIMENTS

[0016] Referring to the drawings and initially to FIGS. 1-5, a urinal chair 100 is provided in accordance with the preferred embodiment of the present invention. As shown in FIG. 2, the urinal chair 100 includes a chair body 2 and a urinal device having a top open drain pan 1, a cushion 21, a container 3 and a cleaning device 4.

[0017] The chair body 2 has a seat supporting frame 23 that defines an open seat area 20 in which the drain pan 1 is fit. The seat supporting frame 23 is provided to support the drain pan 1 with its internal flange 231 upholping a top external flange 17 of the drain pan 1. In this embodiment, the chair body 2 is a wheel chair which includes four wheels mounted on legs 25 of the chair body 2.

[0018] As best seen in FIG. 3, the drain pan 1 is supportably mounted upon the seat supporting frame 23 of the chair body 2 and is fit in the open seat area 20 (FIG. 2) of the chair body 2. Moreover, the drain pan 1 is slanted to drain toward a drainage aperture 12 therein. Specifically, as shown in FIG. 2, the drain pan 1 has a front wall 18, a bottom wall 11 and two opposed side walls 19. The two side walls 19 are merged with the bottom wall 11. The bottom wall 11 is slanted downward and frontward toward the front wall 18 to have a higher rear side 111 and a lower front side 112. In particular, the bottom wall 11 has opposed side portions 16 slanted downward and frontward from the side walls 19 toward the front wall 18 to drain toward the drainage aperture 12 which is defined in a lower, front portion 15 of the bottom wall 11.

[0019] Referring to FIGS. 1 and 2, the cushion 21 is fit over the drain pan 1 and is held by the seat supporting frame 23 of the chair body 2. Moreover, the cushion 21 defines a through hole 22 from top to bottom to permit drainage through the cushion 21 to the drain pan 1, as depicted in FIG. 4. In particular, the through hole 22 of the cushion 21 is misaligned with the drainage aperture 12 in the bottom wall 11 of the drain pan 1. It is understood that the stinky smells can therefore be at least alleviated.

[0020] With reference to FIGS. 2 and 3, the container 3 is affixed under the drain pan 1 and has an opening 31 in communication with the drainage aperture 12 of the drain pan 1 for collection of liquid from the drain pan 1.

[0021] As shown in FIG. 2, the cleaning device 4 includes a cistern 41 and at least one spout 42. The cistern 41 is mounted on a back rest 27 of the chair body 2. The spout 42 is connected to the cistern 41 by a hose 43 and is directed toward the drain pan 1, as shown in FIG. 3, such that the drain pan 1 can be flushed when clean water comes out of the spout 42 from the cistern 41, as depicted in FIG. 5, and thereby ensuring that the drain pan 1 is maintained clean to keep the drain pan 1 from stinking.

[0022] Furthermore, the cleaning device 4 comprises a valve (not shown) disposed in the cistern 41 and a switch 5...
disposed outside the cistern 41. The switch 5 is electrically coupled to the valve for controlling flow of liquid from the cistern 41 through the hose 43 and the spout 42 to the drain pan 1. Preferably, the switch 5 is mounted on an arm rest 26 of the chair body 2 to facilitate the operation of the cleaning device 4.

[0023] It should be noted that the urinal device of the present invention may be applied to various chair bodies. Referring to FIGS. 6 and 7, there are shown two alternate embodiments 200, 300. Each of the two embodiments 200, 300 is similar to the first embodiment 100, except that a chair body 6 or a normal chair body 7 is provided in lieu of the aforementioned chair body 2 in FIG. 4. In the case where the chair body 7 has no arm rests, the switch 5 of the cleaning device 4 can be mounted to a lower side of a back rest of the chair body 7 instead, as depicted in FIG. 7.

[0024] It is to be understood that the disclosed embodiments are illustrative in nature and the invention is not to be limited to any one or more embodiments except as set forth in the following claims.

What is claimed is:

1. A urinal device for use in a urinal chair that includes a chair body with a seat supporting frame defining an open seat area, the urinal device comprising:
   a top open drain pan to be supportably mounted upon the seat supporting frame of the chair body to fit in the open seat area of the chair body; the drain pan slanted to drain toward a drainage aperture therein;
   a cushion fit over the drain pan and defining a through hole from top to bottom to permit drainage through the cushion to the drain pan;
   a container affixed under the drain pan and having an opening in communication with the drainage aperture of the drain pan for collection of liquid from the drain pan; and
   a cleaning device including a cistern and at least one spout that is connected to the cistern and directed toward the drain pan.

2. The urinal device of claim 1, wherein the drain pan has a top flange to be engaged with the seat supporting frame of the chair body.

3. The urinal device of claim 1, wherein the drain pan has a front wall, a bottom wall slanted downward and frontward toward the front wall, and two opposed side walls merged with the bottom wall; and the drainage aperture is defined in a front portion of the bottom wall.

4. The urinal device of claim 3, wherein the bottom wall has opposed side portions slanted downward and frontward from the side walls toward the front wall to drain toward the drainage aperture.

5. The urinal device of claim 3, wherein the through hole of the cushion is misaligned with the drainage aperture in the bottom wall of the drain pan.

6. The urinal device of claim 1, wherein the cleaning device further comprises a valve disposed in the cistern, and a switch disposed outside the cistern and electrically coupled to the valve for controlling flow of liquid from the cistern through the spout to the drain pan.

7. A urinal chair comprising the chair body and the urinal device in accordance with claim 1.

8. The urinal chair of claim 7, wherein the cushion is held by the seat supporting frame of the chair body.

9. The urinal chair of claim 7, further comprising a plurality of wheels mounted on legs of the chair body.

10. The urinal chair of claim 7, wherein the cistern of the cleaning device is mounted on a back rest of the chair body.

11. A urinal chair comprising the chair body and the urinal device in accordance with claim 2, wherein the seat supporting frame of the chair body has an internal flange configured to uphold the top flange of the drain pan.

12. A urinal chair comprising the chair body and the urinal device in accordance with claim 6, wherein the switch is mounted on an arm rest of the chair body.

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