Oct. 12, 1971 K. E. BERRY 3,611,449

TOILET CHAIR

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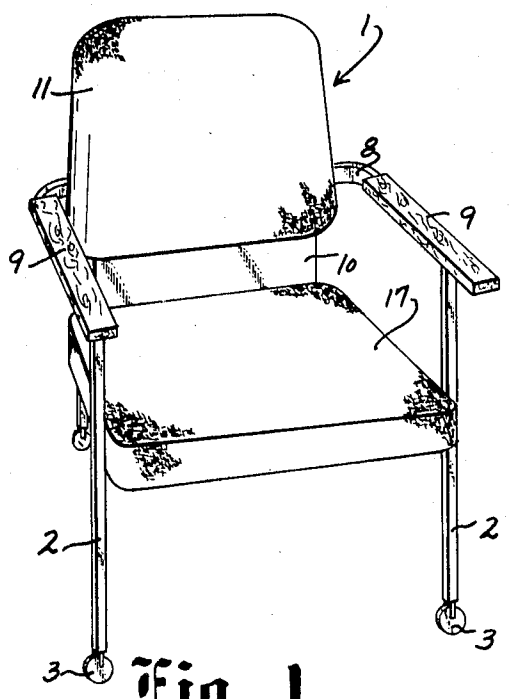


Fig. 1

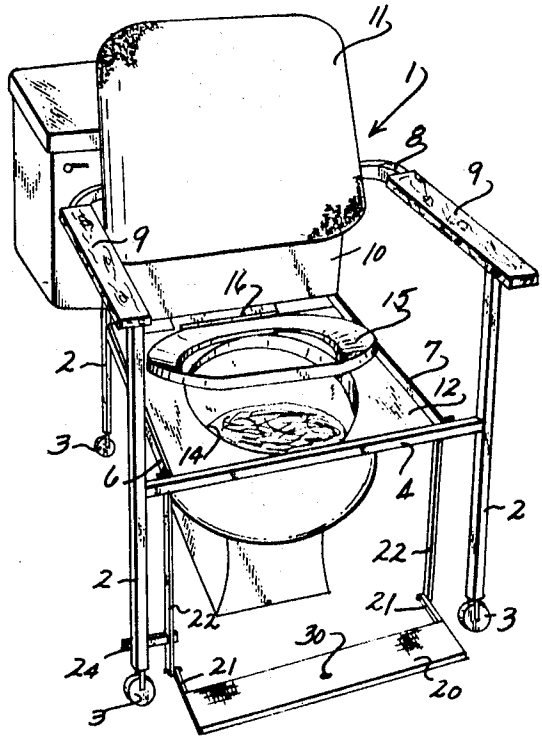


Fig. 2

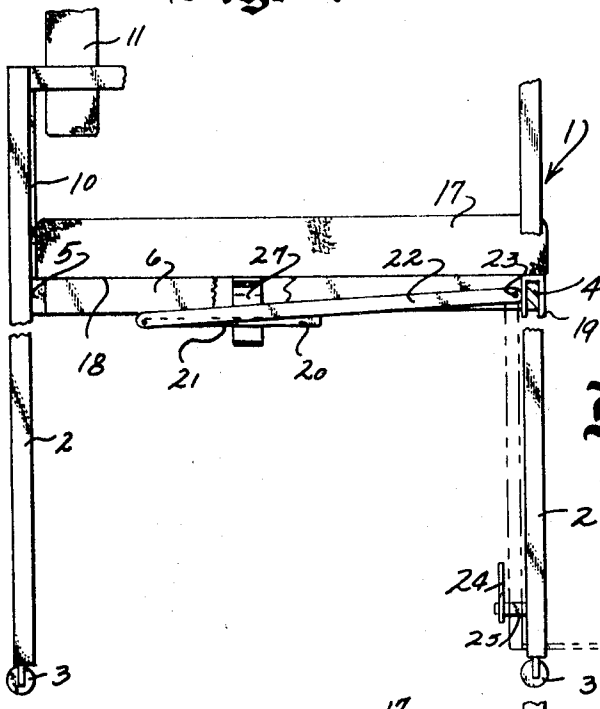


Fig. 3

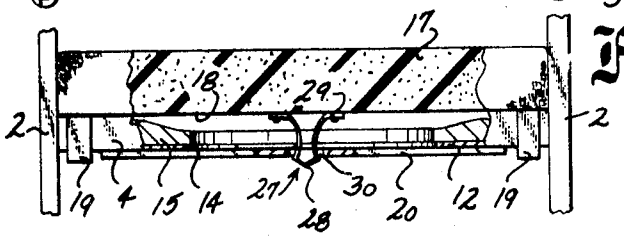


Fig. 4

INVENTOR.
Kenneth E. Berry

BY
Andrus, Sceales, Starke & Sawall

Attorneys

United States Patent Office

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TOILET CHAIR

Kenneth E. Berry, S 24 W 22769 Morningside Drive, Waukesha, Wis. 53186

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ABSTRACT OF THE DISCLOSURE

A chair construction adapted to serve a dual function as an occasional room chair as well as a toilet chair. The chair includes a frame which is movable on wheels or casters and a toilet seat is mounted on the frame and is normally covered by a removable seat cushion. By removing the cushion, the toilet seat is exposed and the chair can be moved into position above a toilet bowl or water closet. A foot rest is hinged to the frame and when the chair is used as an occasional room chair, the foot rest is supported under the toilet seat and locked in this position by a latch which is connected to the seat cushion and extends through the opening in the toilet seat.

BACKGROUND OF THE INVENTION

This invention relates to a chair construction and more particularly to a chair adapted to serve a dual function as an occasional room chair, as well as a toilet chair.

For non-ambulatory patients in hospitals or rest homes, commodes or toilet chairs are frequently utilized. The conventional commode includes a toilet seat and in some instances a removable bed pan is positioned beneath the seat. Not only is a toilet chair of this type unsightly, but the bed pan requires periodic cleaning and the odor is often objectionable. Other types of toilet chairs used in the past have been movable to a position above a toilet bowl or water closet. While toilet chairs of this type eliminate the problem associated with a bed pan, the conventional toilet chair is a rather unsightly item of furniture and is not normally usable as a room chair.

SUMMARY OF THE INVENTION

The present invention is directed to a chair construction which has a dual function in that the chair functions as an attractive occasional chair and can be readily converted to a toilet chair to be moved over a toilet bowl. The chair of the invention includes a frame having a series of legs supported on wheels or casters so that the chair can be readily moved over the floor. A toilet seat is mounted on the frame and is normally covered by a removable seat cushion. By removing the seat cushion, the toilet seat is exposed and the chair can be moved to a position above a toilet bowl.

The chair of the invention also includes a novel foot rest structure in which the foot rest is hinged to the frame and when the chair is used as a toilet chair the foot rest will be in an operative position to support the feet of the patient. When the chair is to be used as an occasional chair, the foot rest is pivoted upwardly to a position beneath the toilet seat and locked in this position by a latch which is connected to the seat cushion and extends through the opening in the toilet seat. With the foot rest locked in its inoperative position and with the seat cushion in

place, the unit appears to be a normal occasional chair without any visual evidence of the foot rest or toilet seat.

The chair can be readily converted to a toilet chair by merely removing the seat cushion, thereby exposing the toilet seat and automatically causing the foot rest to be unlatched. The foot rest will pivot by gravity to a position where it will support the feet of the patient. With the patient sitting in the chair the chair can be moved to a position above the toilet bowl.

The chair of the invention is of simple construction having few moving parts and not only provides a decorative room chair but is readily converted to a toilet chair. The chair eliminates the problems normally associated with a bed pan, as used in the past in commode chairs or the like,

Other objects and advantages will appear in the course of the following description.

The drawings illustrate the best mode presently contemplated of carrying out the invention,

In the drawings:

FIG. 1 is a perspective view of the chair of the invention as used as an occasional room chair;

FIG. 2 is a perspective view showing the chair being used as a toilet chair and located above a toilet bowl;

FIG. 3 is a side elevation of the chair with parts broken away showing the foot rest in the upper locked position; and

FIG. 4 is an enlarged fragmentary view showing the latching arrangement.

The drawings illustrate a chair construction which serves a dual purpose as an occasional room chair, as well as a toilet chair. The chair **1** includes a series of legs **2** which are supported on casters or wheels **3**, thereby enabling the chair to be readily moved over the floor. The legs **2** are connected togeter by front cross member **4** and a rear cross member **5**, as well as a pair of side members **6** and **7**. The legs **2**, as well as the members, **4**, **5**, **6** and **7** provide a frame for the chair. The upper ends of the legs **2** are connected together by U-shaped frame member **8** which supports a pair of arm rests **9**. A back plate **10** is connected to the frame member **8** and a back cushion **11** is mounted on the plate **10**.

According to the invention, a generally-flat pan **12**, made of aluminum, stainless steel or plastic material, is mounted on the frame and is connected to the cross members **4** and **5**, as well as the side members **6** and **7** by bolts which extend through aligned openings in the frame members, as well as through the pan **12**. The central portion of the pan **12** is provided with an opening **14** and a toilet seat **15** is hinged to the pan by hinge **16** and is similarly provided with an opening which registers with the opening **14** in the pan **12** when the toilet seat is in the lowered position.

As shown in FIG. 1, when the chair is used as an occasional room chair a removable seat cushion **17** is supported on the frame and covers the toilet seat **15**. The bottom surface **18** of the seat cushion rests on the frame members **4**, **5**, **6** and **7** and the forward edge of the seat cushion is provided with a pair of U-shaped brackets **19** which straddle the front cross member **4** and thereby position or align the cushion with respect to the pan **12**.

The chair of the invention also includes a foot rest **20** which is adapted to be moved between an operative position, as shown in FIG. 2, in which the foot rest is

in a position to support the feet of the patient, and an inoperative position in which the foot rest is locked beneath the undersurface of the pan **12**, as best illustrated in FIGS. 3 and 4.

The foot rest **20** is supported by a pair of arms **21** which are pivotally connected to the ends of supports **22**. The upper ends of the support **22** are pivotally connected to the outer surfaces of the side members **6** and **7**, respectively, by pins **23**.

The pivotal connection between the arms **21** and supports **22** is such that the arms **21** can be pivoted from a position normal to the supports **22**, as shown in FIG. 2, to a folded position in which the arms **21** and foot rest **20** are generally parallel to the undersurface of pan **12**, as illustrated in FIG. 3. Suitable stops are employed so that the arms **21** will be maintained at an angle of about 90° with respect to the supports **22** when the foot rest is in the operative position, as shown in FIG. 2.

The foot rest is prevented from moving forwardly, when in the operative position, by virtue of the location of the pivotal connection of supports **22** with the side members **6** and **7**. This connection is immediately to the rear of the front cross member **4** so that the front cross member will serve as a stop and limit forward movement of the supports **22**. The support members **22** are prevented from moving rearwardly, when the foot rest **20** is in the operative position, by a latch member **24** which is pivotally connected to one of the legs **2** by bolt **25**. By pivoting the latch member **24** from a position parallel to the leg to a locking position normal to the leg, the end of the latch **24** will engage one of the supports **22** to prevent rearward movement of the support and foot rest. Thus, the foot rest is locked against both forward and rearward movement when it is in the down or operative position.

A latching mechanism associated with the seat cushion **17** is utilized to hold the foot rest in the upper or storage position. The latching mechanism includes a catch **27** which is connected to the undersurface **18** of the seat cushion by a pair of screws. The catch is provided with an outer tapered tip **28** and a central neck **29**. The catch **27** extends downwardly through the aligned openings in the toilet seat **15** and pan **12** and is adapted to be received within a hole **30** formed in the foot rest **20**, to hold or lock the foot rest **20** in the storage position.

To move the foot rest **20** to the storage position, the supports **22** are pivoted rearwardly to a position where they are in general alignment with the side members **6** and **7**. The arms **21** are then pivoted with respect to the supports **22** moving the foot rest **20** to a position substantially parallel with the bottom **18** of the seat cushion. By holding down on the seat cushion and pushing upwardly on the foot rest the tip **28** of the catch **27** will be forced through the hole **30** so that the hole is engaged with the neck **29** of the catch, as illustrated in FIG. 4, to maintain the foot rest in the upper storage position. This latching mechanism serves a dual function in that it not only holds the foot rest in the storage position where it is not generally visible but also serves to hold the rear edge of the cushion downwardly so that a person sitting on the front edge of the cushion will not tend to tilt the rear of the cushion upwardly.

The latching mechanism for the foot rest is automatically released by removing the seat cushion. By moving the seat cushion **17** upwardly the catch **27** is disengaged from the opening **30** in the foot rest and the foot rest will then pivot downwardly by gravity to the operative position.

While the above description illustrates the toilet seat **15** being hinged to the pan **12** it is contemplated that the seat **15** and pan **12** may be molded or otherwise formed as an integeral unit.

Suitable locks can be associated with the casters **3** to lock the casters and prevent movement of the chair when it is in a position above the toilet bowl.

As illustrated in FIG. 1, the chair with the seat cushion **17** in position and the foot rest **20** in its storage position is an attractive occasional chair without the physical appearance of the conventional toilet or commode chair. The chair can be readily converted to a toilet chair by simply removing the seat cushion from the toilet seat and this releases the latching mechanism so that the foot rest **20** will drop into the operative position. The foot rest is then locked in position by pivoting the latch **24** to the cross position. With the patient then seated in the chair the chair can be moved into a position over the toilet bowl as illustrated in FIG. 2. After use as a toilet chair, the chair is converted to its normal appearance by positioning the seat cushion **17** on the pan **12** and manually pivoting the foot rest **20** to the upper position while holding down on the seat cushion thereby causing the catch **27** to engage within the hole **30** of the foot rest to lock the foot rest in the storage position as well as locking the rear portion of the cushion against upward movement.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

I claim:

1. A chair construction, comprising a frame, a toilet seat member extending across the frame and having an opening adapted to register with a toilet bowl when the toilet seat member is positioned above the toilet bowl, a seat cushion removably mounted on the toilet seat member and disposed to completely cover the toilet seat member when mounted thereon, foot rest means pivotally connected to the frame and movable between an operative position in which it supports the feet of a patient seated on the chair and a storage position beneath the toilet seat member, and latch means connected to the seat cushion and extending through the opening in the toilet seat member for engaging the foot rest means and holding the foot rest means in the storage position.

2. The chair construction of claim **1**, and including aligning means for aligning the seat cushion with respect to the frame.

3. The chair construction of claim **1**, and including means responsive to removal of the seat cushion from the frame for releasing the latch means.

4. The chair construction of claim **1**, wherein said foot rest means includes a foot plate and a pair of support members pivotally connected to the frame, said latch means being disposed to engage said foot plate to hold the foot rest means in the storage position.

5. The chair construction of claim **4**, wherein said support members are pivotally connected to the foot plate and arranged so that the footplate can be pivoted to the storage position substantially parallel to the undersurface of the toilet seat member.

6. The chair construction of claim **1**, wherein said latch means includes a flexible latching member attached to the undersurface of the seat cushion, and said foot rest means is provided with an opening to removably receive said latching member.

7. A chair construction, comprising a series of legs, a toilet seat member secured to said legs and having an opening adapted to register with a toilet bowl when the toilet seat member is positioned above the toilet bowl, said legs and said toilet seat member defining a frame, a seat cushion removably mounted on the frame and disposed to completely cover the toilet seat member when mounted thereon, foot rest means pivotally connected to the frame and movable between an operative position in which it supports the feet of a patient seated on the chair and a storage position beneath the toilet seat member, said foot rest means including a foot plate member to support the patient's feet and a pair of supports, one end of each support being pivotally connected to the frame and the other end of each support being pivotally con-

nected to said foot plate member, a first latch member connected to the undersurface of said seat cushion and extending downwardly from said undersurface through the opening in said toilet seat member and terminating at a level beneath the toilet seat member, and a second latch member associated with the foot plate member and disposed to engage said first latch member when the foot rest means is in the storage position to lock said foot rest means in said storage position.

8. The chair construction of claim **7**, and including means operable as a consequence of removal of the seat cushion from the toilet seat member for disengaging said first and second latch members.

9. The chair construction of claim **8**, and including means for moving the foot rest means to the operative position on disengagement of said first and second latch member.

10. The chair construction of claim **7**, wherein said first latch member is a deformable catch having an enlarged head terminating in a tapered tip and having a central neck portion of reduced dimension located adjacent said head, and said second latch member is a hole in said foot plate member, said head being arranged to deform and pass through said hole to thereby provide engagement of said neck portion with said hole.

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HENRY K. ARTIS, Primary Examiner

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