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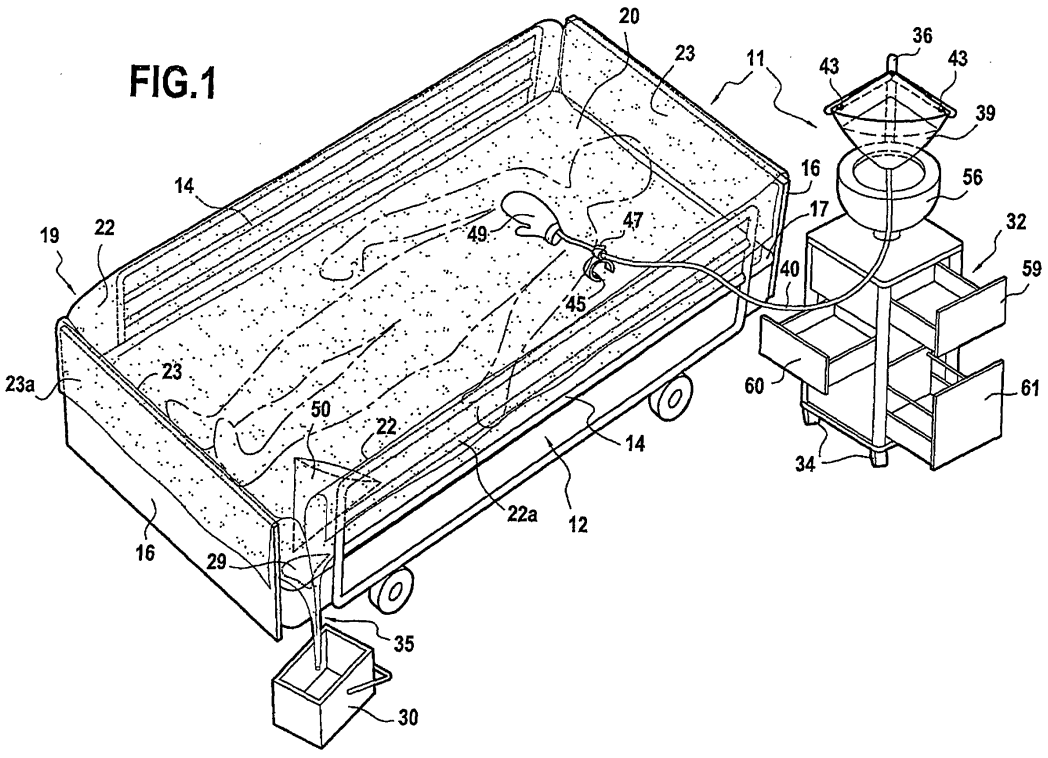
(54) **Apparatus for facilitating washing of a bedridden person**

(57) An apparatus for allowing washing of a patient without having to move the patient out of their bed. The apparatus comprises a tarpaulin shaped into a folding bathtub (19) having side walls (22) and transverse walls (23) that cover at least in part the side and transverse rails (14, 16) of the bed.

FIG.1



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Description

[0001] The invention relates to an apparatus for use with a patient's bed, which allows the caregiver to wash a bedridden patient without having to move him/her out of the bed.

[0002] In a hospital or geriatric center, washing a bedridden patient, or a patient that is too weak to get up, is often a source of misery for the patient and causes significant difficulty for the caregiver. A device called a "patient lifter" is currently used, but it is complicated and restricting. These systems rarely make possible the optimal positioning of the patient, which makes the job of the caregiver quite tiring.

[0003] The invention provides an apparatus for use with a bed having side and transverse rails to facilitate the washing of a bedridden person, the apparatus comprising a tarpaulin shaped into a folding bathtub, having side walls and transverse walls for covering at least partly the side and transverse rails.

[0004] The side and transverse rails, which are usually part of a patient bed, are thus used as a kind of frame for the tarpaulin, shaping it to that of a bathtub.

[0005] On the other hand, if the bed is a high performance bed, it will be provided with the means for adjusting the height of the bed support surface. Hence, the patient may be better placed so that the washing is done with minimum muscular fatigue for the caregiver.

[0006] In one embodiment, the folding bathtub is provided with a discharge pipe.

[0007] The discharge pipe may conveniently comprise extensions welded to two adjoining walls, with a discharge spout located at an angle to and below the folding bathtub. Then, the means for adjusting the bed support surface allow a slight gradient towards the inlet of this discharge pipe to allow the natural flow of waste water towards the same. Thus, this permanent discharge of waste water allows the caregiver to efficiently wash the patient due to the discharge of dirty water and clean water that comes in contact with the patient's body. The waste water is collected in a bucket located at the foot of the bed.

[0008] Advantageously the tarpaulin is disposable, for example, it is made of biodegradable plastic. Thus, after use, the tarpaulin is destroyed by biodegradation, and the long cleaning and sterilization of showers between patients are no longer necessary, unlike now, when cleaning takes up to 30 minutes after an approximately 15-minute washing.

[0009] Advantageously the side walls are extended by flaps that cover the outer side of the side and transverse rails. Hence, the entire bed is protected against any kind of contamination. In one embodiment, the weight of the flaps is enough to keep them in place without the need to fasten the tarpaulin to the rails.

[0010] For the washing procedure to take place right in the patient's room, the apparatus is conveniently provided with a water tank which is installed above the bottom of the said folding bathtub. A pipe is connected to this tank that routes the water into the bathtub, and a tap controls the flow of water into the pipe.

[0011] Advantageously the water tank is a flexible plastic pocket hung on a support, for example a pole. This flexible pocket is conveniently disposable and is preferably made of biodegradable plastic. The support may be fastened to the bed, but it is better if the apparatus includes a mobile table, for example a table provided with wheels. In this case, the support may be conveniently fastened to the mobile table. The table may have a basin for regular ablutions.

[0012] Preferably the flexible plastic water tank and the pipe form a single-use assembly.

[0013] The tap may be connected to a wristband or the like by which it can be attached to the caregiver's arm. The tap may comprise a simple pinch mechanism for the flexible pipe connected to the water tank.

[0014] Preferably the water reaches the patient through a disposable wash glove. The glove may be disposable, for example a free end of the pipe, which is located downstream of the tap, is engaged with the wash glove. The caregiver can insert his/her hand with the wristband into the glove. The water passes through the wash glove, thus splashing is avoided. Moreover, there is a less risk that senile patients, like for example a person with Alzheimer's, gets scared or is taken by surprise by this type of washing through a glove. In this type of washing, the caregiver makes physical contact with the patients and can calm them down.

[0015] The invention will now be further described by way of example with reference to the accompanying drawings, in which:

Figure 1 is a perspective and schematic general view of the apparatus installed on a patient bed, during the washing of the patient; and

Figure 2 shows a disposable tarpaulin roll.

[0016] The apparatus 11 for making washing of a bedridden patient easier, as shown, is designed to fit a patient bed 12, in a hospital or geriatric center, of the type provided with two side rails 14 and two transverse rails 16 (the latter form the headboard and footboard) positioned at a height around the support surface 17 of a patient.

[0017] The device principally comprises a tarpaulin shaped into a folding bathtub 19, which has a bottom 20 and four walls. The bottom 20 is rectangular and has approximately the same size as the support surface, so that the side walls 22 and transverse walls 23 of the bathtub cover at least in part the side and transverse rails of the bed. The side rails 14 and transverse rails 16 are preferably entirely covered on the inner side. Advantageously, the walls 22, 23 are extended by flaps 22a, 23a which cover the outer side of the side and transverse rails.

[0018] The folding bathtub may simply comprise a single flexible plastic piece in which the necessary notches and welding for the side walls 22 and transverse walls

23 as well as for flaps 22a, 23a are made.

[0019] At one of its corners the folding bathtub has a discharge pipe 35. This pipe may be sewn on but preferably it is formed, as shown, by extensions welded to two adjoining walls (a longitudinal wall 22 and a transverse wall 23) of the folding bathtub. The welding also defines a discharge spout 29 at an angle to the folding bathtub. Waste water is drained through the discharge pipe and collected in a bucket 30 near the bed.

[0020] Advantageously the plastic used for the folding bathtub 19 and for the discharge pipe 25 is biodegradable. The bathtub is then disposable and is intended to be discarded and destroyed once the washing procedure has ended, so that the caregiver does not have to clean and/or disinfect it.

[0021] As shown in Figure 2, an advantage of the folding bathtubs 19 is that they can be supplied folded in rolls 29; the bathtubs being connected by separable junctions 31.

[0022] For washing in a patient's room, the apparatus advantageously includes a mobile table 32 mounted on wheels 34 and provided with a support 36. The table makes it possible to install a water tank 34 above the bottom 20 of the folding bathtub. This tank is extended by a pipe 40 which is long enough to route the water towards the patient who is lying in his/her temporary bathtub.

[0023] Advantageously the tank 39 is a flexible plastic pocket attached to the support 36.

The pipe may be an extension of this pocket, and the assembly may be formed by extrusion/blowing. The tarpaulin assembly of the bathtub and the tank can be made into a roll as shown in Figure 2.

[0024] With a flexible plastic tank, the support 36 can comprise a vertical post attached to the table and two horizontal arms 43 provided with hanging means for holding the tank 39 unfolded, as shown in Figure 1. The capacity of such a tank is about 6 litres.

[0025] A wristband 45 or something similar is provided with a tap 47 which allows the control of the water flow. The tap consists of a simple device allowing the flexible pipe 40 to be pinched or not. Thus it has a ring through which the pipe goes and a screw provided with a button that passes through this ring and that acts on the pipe. When the caregiver puts the wristband 45 on his/her wrist, the tap 47 through which the water flows is near his/her other hand. The device conveniently includes a wash glove 49, which should preferably be disposable, and the free end of the pipe 40, below the tap, is inserted into the wash glove.

[0026] The bathtub is completed with a waste pocket 50 made of an insert welded to the inner wall of the tarpaulin that forms the folding bathtub. Preferably, this pocket is located near the discharge spout 29. This pocket allows collection of defecations as a result of the relaxation of the bedridden patient during the washing procedure.

[0027] In the illustrated embodiment, the mobile table is provided with a basin 56 as additional water storage. To fill it up, the shower head of the adjoining bathroom can be conveniently hung on the support 36. This allows adjustment of the water temperature by letting it flow for some time in the basin or the tank 39, with the drain open. Then, once the temperature has stabilized, the basin 56 and/or the tank 39 may be filled up for use near the bed, by moving the mobile table 32. It should be noted that the mobile table may be used independently as well, when the patient can sit up. In this case the shower head is hung on the bearing 36 to fill up the basin. The caregiver can provide assistance to the patient by letting the water flow into the basin 56. The basin has a discharge outlet allowing the control of the flow of the waste water as desired, i.e., full basin or continuous draining.

[0028] The mobile table is provided with several drawers 59, 60, 61 allowing the storage of the washing products and accessories. For example, the bucket 30 may be stored in the bottom drawer 61. It should be noted that, as shown, the three drawers are provided alternately on two adjoining walls of the mobile table. Hence, they can be opened and accessible at the same time. Each drawer can be opened by a known mechanism, comprising a release device provided with a spring. The release device works by pressing the front side of the drawer. Thus, there are no handles. The absence of handles is an advantage because it prevents a patient with Alzheimer's disease from having access to products in the drawers.

[0029] Another advantage is that the caregiver does not leave the patient alone and remains at his/her side as each drawer can be handled with the foot (drawer 61), knee (drawer 60) or hand (drawer 59).

[0030] During the washing procedure, the patient is lifted and the tarpaulin forming the folding bathtub is unfolded on the support surface of the bed 17 and on the bed rails 14, 16, as shown. The bucket is placed to collect waste water flowing through the discharge pipe. The height and inclination are adjustable.

[0031] Moreover, in the adjoining bathroom, the tank is installed on its support and filled with water, and so is the basin. The mobile table is then brought near the bed and the caregiver may begin the washing procedure after putting the wristband on his/her wrist and after introducing the end of the pipe into the wash glove. Once the washing procedure has ended, the folding bathtub, the tank and pipe, as well as the wash glove, are disposed of.

Claims

1. Apparatus for use with a bed having side and transverse rails to facilitate the washing of a bedridden person, the apparatus comprising a tarpaulin shaped into a folding bathtub (19), having side walls (22) and transverse walls (23) for covering at least partly the side and transverse rails (14, 16).

2. Apparatus as claimed in claim 1, wherein said folding bathtub has a discharge pipe (25).

3. Apparatus as claimed in claim 2, wherein the discharge pipe is formed by extensions welded to two adjoining walls (22, 23).

4. Apparatus as claimed in any preceding claim wherein the side walls are extended by flaps (22a, 23a) that cover the outer side of the side and transverse rails (14, 16).

5. Apparatus as claimed in any preceding claim, the apparatus further comprising a water tank (39) mounted above the bottom of the folding bathtub, a pipe (40) connected to the water tank and a tap (47) that controls flow through the pipe.

6. Apparatus as claimed in claim 5, wherein the water tank (39) is a flexible plastic pocket hung on a support (36).

7. Apparatus as claimed in claim 6, wherein the pocket is disposable, preferably made of biodegradable plastic.

8. Apparatus as claimed in either claim 6 or 7, wherein the support (36) is mounted on a mobile table (32).

9. Apparatus as claimed in any one of claims 5 to 8, wherein the tap (47) is connected to a wristband (45) that can be attached to the caregiver's arm.

10. Apparatus as claimed in claim 9, wherein a free end of the pipe downstream of the tap is engaged with a wash glove (49).

11. Apparatus as claimed in claim 8 wherein the mobile table carries a basin (56).

12. Apparatus as claimed in any preceding claim wherein the bathtub is disposable, preferably formed from a biodegradable plastic.

13. Apparatus as claimed in any preceding claim wherein a pocket for human waste is soldered to an internal wall of the bathtub.

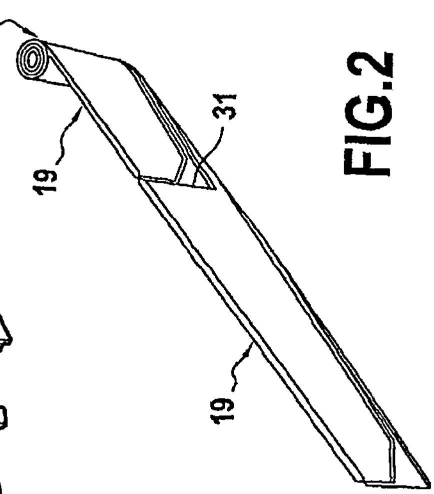
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FIG.2

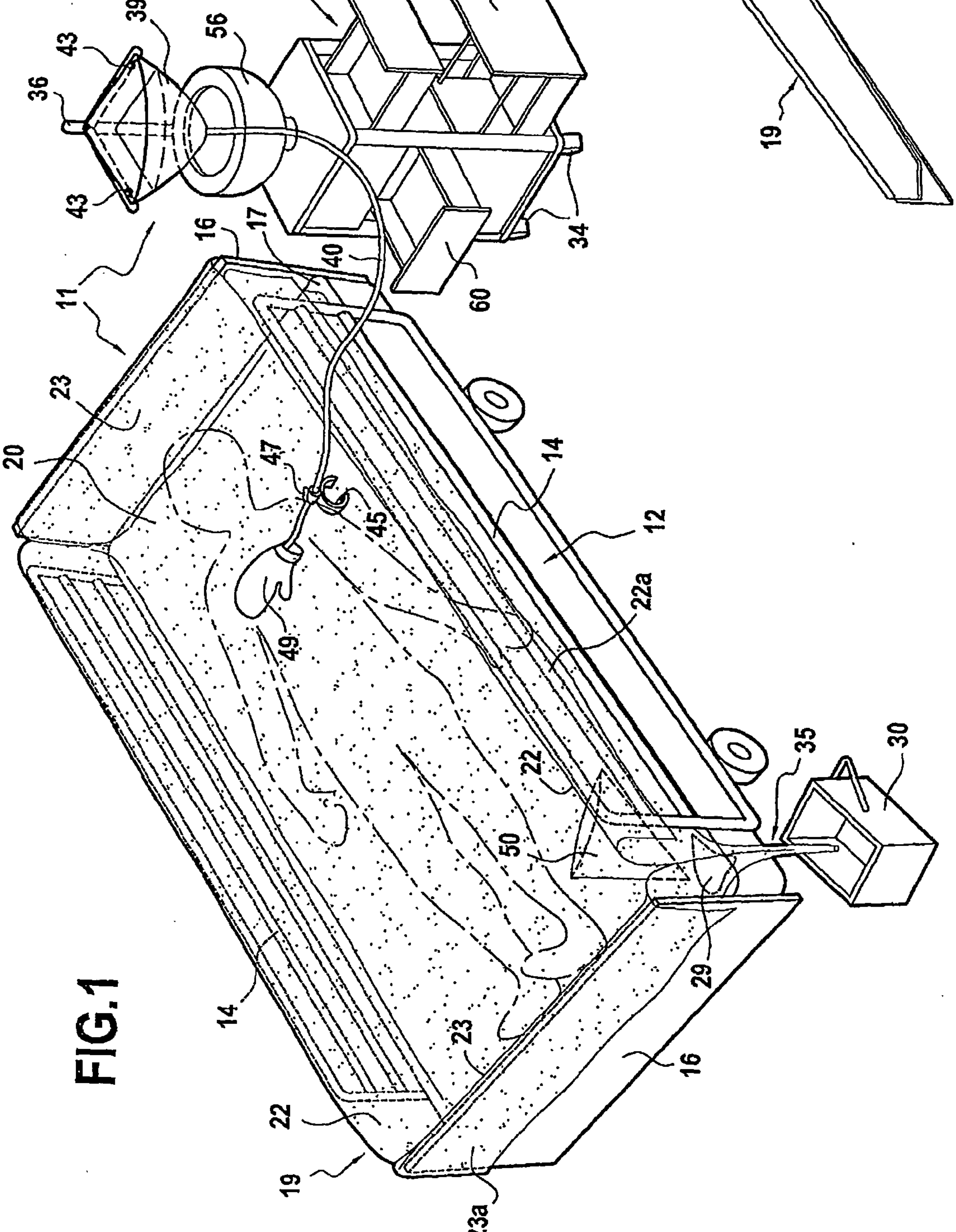
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FIG.1

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EUROPEAN SEARCH REPORT

Application Number
EP 10 25 0129

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	US 2006/282944 A1 (SAGI KOREN N [IL]) 21 December 2006 (2006-12-21) * figure 1 *	8	

TECHNICAL FIELDS SEARCHED (IPC)

A61G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	5 March 2010	Bielsa, David

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 25 0129

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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05-03-2010

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