March 9, 1971 G. ANDERSON 3,568,217

COLLECTION DEVICE FOR WHEEL CHAIRS

Filed Sept. 10, 1968

FIG. 1

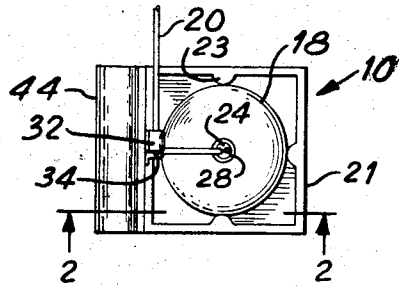


FIG. 2

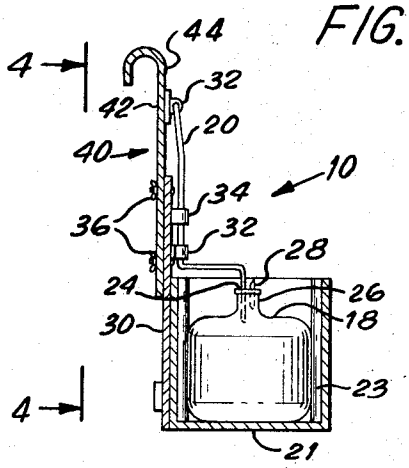


FIG. 3

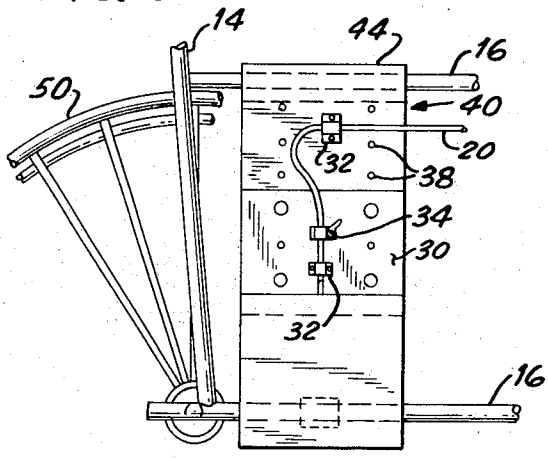


FIG. 4

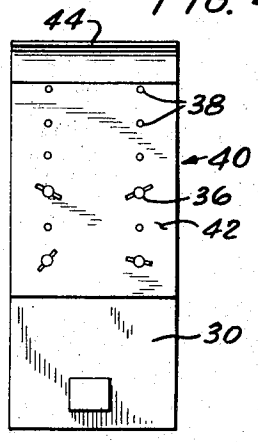
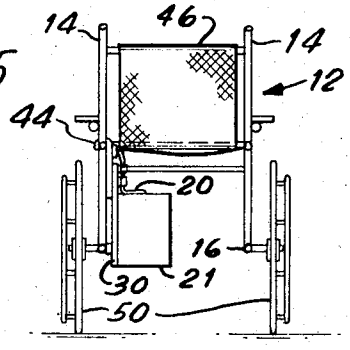


FIG. 5



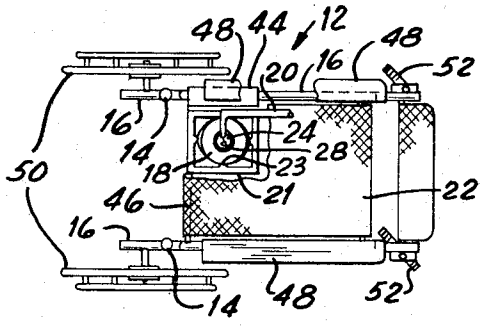


FIG. 6

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COLLECTION DEVICE FOR WHEEL CHAIRS

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U.S. Cl. 4—110 5 Claims

ABSTRACT OF THE DISCLOSURE

This invention relates to collection apparatus for an invalid chair which includes a back frame and a seat frame, both connected to a supporting frame. The collection apparatus comprises support plate means for adjustably attaching the support plate means to the frame, box-like reservoir holding means on the plate means, and a reservoir detachably replaceably supported by the reservoir holding means. A collection tube is detachably secured to the reservoir and to the plate means for facilitating delivery of fluid excretions to the collection reservoir and valve means for controlling flow of fluid through said tube is secured to the plate means.

This invention relates to a collection apparatus and more particularly to a collection apparatus which is designed for adjustable and detachable connection to invalid chairs and which permits continuous collection services to be made to the patient from the bottom portion of the chair without disturbing or moving the patient in any manner.

After certain types of operations continuous drainage of the patient's body excretions is often required for protracted periods. For example, patients subjected to urological surgery frequently require continuous drainage of the bladder. In a colostomy operation for the removal of the diseased part of an intestine, an incision is made through the abdominal wall through which the upper cut end of the severed intestine is brought out and allowed to drain into a suitable receptacle for an extended period before joining the cut ends together. Because the problems arising from collection procedures are of a highly delicate nature, the prior art devices or systems have proven unsatisfactory to the extent that they are bulky, uncomfortable, conspicuous or require confining the patient to bed.

For example, a widely used colostomy collection device is a drain sack supported on the body by straps. Although the wearer is not confined to bed, he is, nevertheless, uncomfortable due to the increasing weight of the drain sack while it is filling. The continuous discharge spills over the patient and his clothing while the sack is being emptied, which must be done frequently, and is highly objectionable. Also, the wearer may be embarrassed because the sack causes an unsightly bulge in his clothing.

Devices used for drainage of the bladder include a wheel chain having a toilet seat incorporated therein, a removable bed pan being provided beneath the seat. However, a primary disadvantage of the wheel chair is that it has a tendency to produce pressure sores on the user. In another system, the patient is confined to his bed because of the size and complexity of the equipment used.

It is the primary object of the present invention to provide a collection apparatus for invalid chairs which permits continuous drainage of body excretions even while the collection reservoir is being emptied of the fluid contained therein.

It is another object of the invention to provide a collection apparatus for invalid chairs having a collection reservoir which is readily removable from its support,

and its removal therefrom will not disturb the collection service.

A further object of this invention resides in the provision of an adjustable collection apparatus for invalid chairs which may be installed on virtually every type of invalid chair.

Still further objects and features of this invention reside in the provision of a collection apparatus which is simple to use, which is not uncomfortable, which is inexpensive to manufacture, and which is inconspicuous to persons viewing the patient.

FIG. 1 is an enlarged top plan view of the collection apparatus in accordance with the concepts of this invention;

FIG. 2 is an enlarged vertical sectional view of the collection apparatus taken along the plane of line 2—2 in FIG. 1;

FIG. 3 is an elevational view of the support plate of the collection apparatus as attached to the side portion of the support frame of an invalid chair;

FIG. 4 is an elevational view of the exposed side of the support plate as viewed from the side of the invalid chair showing the means of adjusting the position of the plate with respect to the support frame looking along the plane of line 4—4 in FIG. 2;

FIG. 5 is a rear elevational view of the invalid chair showing the manner of attachment of the collection apparatus; and

FIG. 6 is a partial top plan view of the invalid chair and the collection apparatus attached thereto, parts being broken away to show other parts in detail.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral **10** is used to generally designate the collection apparatus of the present invention. The collection apparatus **10** is securely attached to an invalid chair generally designated as **12** and includes a seat **22**, a back **46**, a pair of arm rests **48**, a pair of large rear wheels **50** and a pair of small front directional wheels **52** and a support frame **14** provided with parallel crossbars **16** thereon. Of course it is to be understood that the invalid chair need not be mobile as in the embodiment herein described.

The collection apparatus **10** comprises a reservoir **18** and a flexible collection tube **20**, both preferably being manufactured from transparent materials. Reservoir **18** is seated in a box-like container **21** provided with reservoir support flanges **23** beneath seat **22**. The lower portion of collection tube **20** fits through a hole in cap **24** which seals the opening of neck **26** of reservoir **18**. A second short tube **28** is also inserted within the cap **24** and equalizes the pressure inside and outside of reservoir **18**. Collection tube **20** is supported on a first support plate **30** by means of clips **32** attached thereto, the first support plate **30** being attached to a side of container **21**.

A pinch valve **34** controls the flow of fluid through tube **20** secured to plate **30**. Attached to the first support plate **30** by connection screws **36** fitted through apertures **38** is a hook element **40** consisting of a second plate **42** integrally formed with an arcuately shaped flange **44**. Apertures **38** passing through both support plate **30** and hook element **40** permit adjustment of flange **44** to a height which will facilitate the attachment of flange **44** to a crossbar **16** of virtually all standard invalid chairs.

In use, collection tube **20** is attached to the patient's body and fluid excretion is permitted to flow through tube **20** to reservoir **18**. When it is desired to empty reservoir **18**, valve **34** is closed and cap **24** is detached from reservoir **18**. Fluid continues to collect in the closed tube until cap **24** is reinserted into the reservoir **18** and valve **34** is opened. This procedure is repeated as often as necessary.

A latitude of modification, substitution and change is intended in the foregoing disclosure, and in some instances, some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

I claim:

1. A collection apparatus for an invalid chair having a supporting frame, a back frame connected to said supporting frame, and a seat connected to said supporting frame, said collection apparatus comprising support plate means secured to said frame, reservoir holding means on said plate means, a collection reservoir detachably replaceably supported by said reservoir holding means, a collection tube for facilitating delivery of fluid excretions from the invalid to said collection reservoir, means attaching said collection tube to said plate means, and valve means on said tube for controlling flow of fluid through said tube secured to said plate means.

2. A collection apparatus according to claim **1**, wherein said support plate means includes a hook element for detachably securing said support plate means to said supporting frame.

3. A collection apparatus according to claim **2**, including first and second support plates, means for adjustably attaching said hook element on said first support plate to said second support plate, and means for securing said first support plate to second support plate permitting adjustment of the position of said first support plate hook element means with respect to said supporting frame.

4. A collection apparatus according to claim **1**, wherein said reservoir holding means is a box-like container on said support plate means.

5. A collection apparatus according to claim **1**, wherein said collection tube is detachably replaceably secured to said support plate means and to said reservoir for facilitating removal and replacement of said reservoir with respect to said reservoir holding means.

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