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- (73) Patenthaver: **B. Braun Medical SAS, 26 Rue Armengaud, 92210 Saint-Cloud, Frankrig**
- (72) Opfinder: **BLOCQUEL, Laura, 13, rue Croix-la-Comtesse, 28402 Nogent-le-Rotrou, Frankrig
PREZELIN, Anthony, 10 bis, rue Giroust, 28400 Nogent-le-Rotrou, Frankrig**
- (74) Fuldmægtig i Danmark: **Plougmann Vingtoft A/S, Strandvejen 70, 2900 Hellerup, Danmark**
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BAG FOR COLLECTING URINE

The invention relates to a pouch intended to collect urine.

Urine pouches are used to collect urine when a patient is catheterised. The urine
5 can thus flow from the bladder through the catheter into the urine pouch. For this, a
catheter can be durably attached, for example, when the patient must stay in bed and
when the urine must be durably deviated. A catheter can also be attached short-term,
only to empty the bladder once. In the latter case, intermittent catheterisation is referred
to, which is for example used when a patient is paraplegic and when the bladder must be
10 emptied regularly by catheterisation or in case of issues with incontinence. Usually,
intermittent catheterisation is carried out by the patient themselves several times a day.

In particular, in the scope of intermittent catheterisation by the patient themselves,
comfortable manipulation of the urine pouch before and after use is important.

Document EP 2 072 075 A1 describes, for example, a urine pouch with a central
15 extension containing a catheter. This extension can be folded over the pouch, then the
two side edges of it, adjoining each side of the folded extension, can then be folded on
top of one another. The pouch can thus be folded to be able to be stored easily and in a
compact manner by the patient. A patient who practises intermittent self-catheterisation
needs 4 to 6 catheters every day. They must consequently have with them, several
20 pouches with catheter to be autonomous. Pouches containing a catheter are usually
packaged together and the patient must manipulate this packaging or must have loose
pouches with them. The two possibilities cause disadvantages for patients with reduced
mobility.

The aim of the invention is to create a urine pouch which can be folded easily to be
25 not very bulky before its use, and which can be manipulated easily by a patient, in
particular a paraplegic patient.

This task is fulfilled by the set of urine collection pouches and urinary catheter
according to the present invention, defined in independent claim 1. Different preferable
embodiments are defined in the dependent claims.

30 Thus, a set of ready-to-use urinary catheter and collection pouch can be made
available to the patient, in particular for intermittent catheterisation. The urinary catheter
can be placed in the extension of the pouch with its distal end upwards.

The ready-to-use pouch, unused, with the catheter inside, can thus be stored advantageously in a compact manner by folding the pouch horizontally once and by folding the extension downwards, then by winding it. Usual catheters have on their proximal end, a flat connector. The end of the folded pouch comprising this connector can thus be wound in a radius larger than the opposite end. Thus, this gives a cone shape to the wound assembly. Several pouches wound in this manner can be stacked in one another. A patient can discretely have a sufficient stock for one day with them. Pouches are well-protected against damage, even once out of their overwrapping, and are easy to manipulate.

The pouch can thus have, on the upper end of the extension, preferably a pre-cut seam allowing to tear the extension, even though the distal end of the catheter can be slid through the extension. The proximal end of the catheter remains in the extension of the pouch. The connector usually situated on the proximal part of the catheter can take on the function of a stop, and prevents the catheter from fully exiting the pouch. The catheter can then be used in a usual manner.

According to the invention, the vertical height of the extension represents about half of the total height of the pouch. The pouch can thus be folded once before or after having folded the extension with the catheter towards the pouch, then be wound. The assembly can be folded easily by a patient, even with limited manual capacities.

Advantageously, the collection pouch according to the invention can be equipped with a nonreturn valve at the inlet of the collection compartment which prevents a backflow of the fluid in the direction of the inlet.

According to a preferred embodiment of the invention, the welded perimeter of the lower part of the collection compartment of the pouch corresponds essentially to a circle sector of which the angle is at least 180° .

Thanks to this particular shape, the pouch can stay upright once folded and does not tilt on the side. The patient can place the filled pouch on a flat surface, for example to get dressed, and the pouch remains there without anything flowing out.

The angle of the essentially circle sector of the lower part of the collection compartment of the pouch can advantageously be comprised between 180° and 330° , and in particular between 225° and 270° . The collection compartment thus reaches its maximum width before being narrowed upwards. Tests have shown that the stability of the filled pouch can be improved in this manner.

The shape of the lower part of the compartment can essentially be symmetrical along a vertical axis. The pouch is narrowed thus regularly from the two sides.

The pouch can have a narrowing at its compartment and can be widened upwards to form a narrowing vertically limited at the collection compartment.

5 Preferably, the circular part of the collection compartment has a volume between 350 and 550ml and in particular, 450ml. Tests have shown that a pouch having a compartment of these dimensions has a stability from a content of about 200ml of liquid. The urine volume discharged by a patient is usually between 200ml and 400ml, such that a pouch according to the invention filled with this volume of liquid remains stable on a
10 flat surface.

Advantageously, the collection compartment can have a maximum volume of about 750ml. This corresponds to the maximum volume of urine discharged by a patient. A pouch of these dimensions cannot therefore overflow, even if the volume poured is greater than the volume usually collected.

15 An embodiment example of the invention is explained in more detail below using the appended drawings:

Figure 1 represents an embodiment example of a collection pouch integrating a female urinary catheter;

Figure 2 represents the embodiment example according to figure 1 in its wound
20 state.

Figure 1 presents a favoured embodiment example of a pouch **1** according to the invention intended to collect urine. A female urinary catheter **9** is integrated into an extension **8** of the pouch.

The pouch **1** is made up of two superimposed sheets of plastic welded along their
25 perimeter **2**.

The pouch **1** comprises a collection compartment **3** for collecting urine, an intake orifice **4** and an inlet **6** towards the collection chamber **3** connected to the intake orifice **4** by a channel **12**. The inlet **6** delimits the compartment **3** upwards.

The pouch has on its intake orifice **4**, a vertical extension **8** which is welded along
30 its perimeter **22** such that the pouch is totally closed. In the extension **8**, a female urinary catheter **9** is situated.

The distal end of the catheter **9** can be slid then through the pouch by tearing a seam **14** provided for this purpose on the end of the extension **8** and can be used in a

usual manner. The proximal end of the catheter **9** with the connector **16** thus remains inside the extension **8**, even though urine can flow directly into the chamber **3** of the pouch **1**.

5 The pouch **1** also has one single nonreturn valve which is formed by the two welds **7** and which prevents the backflow of liquid through the inlet **6** in the channel **12** as soon as the chamber has reached a certain filling level.

The assembly can be sterilised, even though the urinary catheter **9** can be packaged ready-to-use.

10 The collection pouch **1** has the height h_0 which corresponds to almost twice the height h_p of the extension **8**. The catheter has a flat connector **16** on its proximal end.

The pouch can thus be stored in a compact manner by folding first the extension **8** with the catheter **9** upwards and by folding the pouch **1** horizontally at approximately half its height. The pouch can then be wound.

15 **Figure 2** shows the pouch **1** according to figure 1 once wound. As can be seen, a cone is created by the connector of the catheter in the extension folded inwards. The wound pouch can be fixed by a small sticker **20**.

Patients can keep on them the ready-to-use wound pouch **1** with the catheter, in a compact and discrete manner. A patient who practises intermittent self-catheterisation needs 4 to 6 catheters every day. Given that the pouches wound in the shape of a cone can be stacked easily, patients can also easily have several pouches with them. The wounds and stacked pouches are well-protected against damage, even on the overwrapping.

25 Referring to figure 1, it can be seen that the welded perimeter of the lower part **30** of the compartment **3** of the pouch **1** essentially corresponds to a circle sector **S** of which the angle is about 225° . The shape of the lower part **30** of said compartment **3** is essentially symmetrical along a vertical axis **A**. The pouch has a narrowing **5** at the compartment **3**.

30 Thanks to this structure of the pouch, the pouch can stay upright on a flat surface without tilting from a filling level of about 200ml. The pouch can be put down after use for an instant, such that, for example, the patient can get dressed or give a subsequent sample before disposing of the liquid that it contains.

The circular part of the collection compartment **3** has a volume of about 450ml. Once the bladder is fully emptied, normally between 200 and 400ml of urine is found in

the chamber **3** of the pouch **1**. The patient can thus put down the filled pouch for a short amount of time in order to get dressed. Thanks to its structure according to the invention, the pouch **1** remains stable, does not tilt and does not tip over.

The maximum volume of the collection compartment **3** is about 750ml to avoid any
5 overflow in case of a large volume of urine to be collected.

The pouch **1** further comprises a zone **16** which comprises a small chamber **18** which can be opened by a tearing seam **20** in order to empty the pouch.

Patentkrav

1. Sæt af urinopsamlingspose (1) og urinkateter (9), idet opsamlingsposen (1) består af to overlejrede plastplader svejset sammen langs deres omkreds (2), idet opsamlingsposen (1) omfatter:

- 5 - et opsamlingskammer (3);
 - en indgangsåbning (4) og
 - et indløb (6) af nævnte opsamlingskammer (3) i forbindelse med indgangsåbningen (4) afgrænsende nævnte opsamlingskammer (3) opad, hvor

- 10 - indgangsåbningen er forsynet med en vertikal forlængelse (8) lukket langs sin omkreds (22), idet nævnte urinkateter (9) er integreret i den vertikale forlængelse (8);

kendetegnet ved, at:

- indgangsåbningen (4) og indløbet (6) er vertikalt forskudt; og
 15 - den vertikale højde (ho) af posen (1) uden vertikal forlængelse (8) svarer til det dobbelte af højden (hp) af nævnte forlængelse (8), således at den vertikale forlængelse (8) med kateteret (9) kan bøjes nedad ved at folde posen (1) horisontalt til omtrent halvdelen af dens højde, og posen kan derefter rulles op, således at posen kan opbevares på en kompakt måde.

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2. Sæt ifølge krav 1, **kendetegnet ved, at** kateteret (9) har en flad konektor (16) ved sin proksimale ende.

3. Sæt ifølge et hvilket som helst af kravene 1 til 2, **kendetegnet ved, at** posen
 25 (1) har en kontraventil (7) ved indløbet (6) til nævnte kammer (3).

4. Sæt ifølge et hvilket som helst af kravene 1 til 3, **kendetegnet ved, at** den svejsede omkreds af den nedre del (30) af kammeret (3) i alt væsentligt svarer til et cirkelområde (S), hvis vinkel (α) er mindst 180° .

30

5. Sæt ifølge krav 4, **kendetegnet ved, at** vinklen (α) af cirkelområdet (S) af den i alt væsentligt cirkelformede del er mellem 180° og 330° , og især mellem 225° og 270° .

- 6.** Sæt ifølge et hvilket som helst af kravene 4 eller 5, **kendetegnet ved, at** formen af den nedre del (30) af nævnte kammer (3) i alt væsentligt er symmetrisk langs en vertikal akse (A).
- 5 **7.** Sæt ifølge et hvilket som helst af kravene 4 til 6, **kendetegnet ved, at** posen har en indsnævring (5) på højde med kammeret (3).
- 8.** Sæt ifølge et hvilket som helst af kravene 1 til 7, **kendetegnet ved, at** den cirkelformede del af opsamlingskammeret (3) har en volumen på mellem 350 og
10 550 ml, især på 450 ml.
- 9.** Sæt ifølge et hvilket som helst af kravene 1 til 8, **kendetegnet ved, at** opsamlingskammeret (3) har en maksimal volumen på ca. 750 ml.

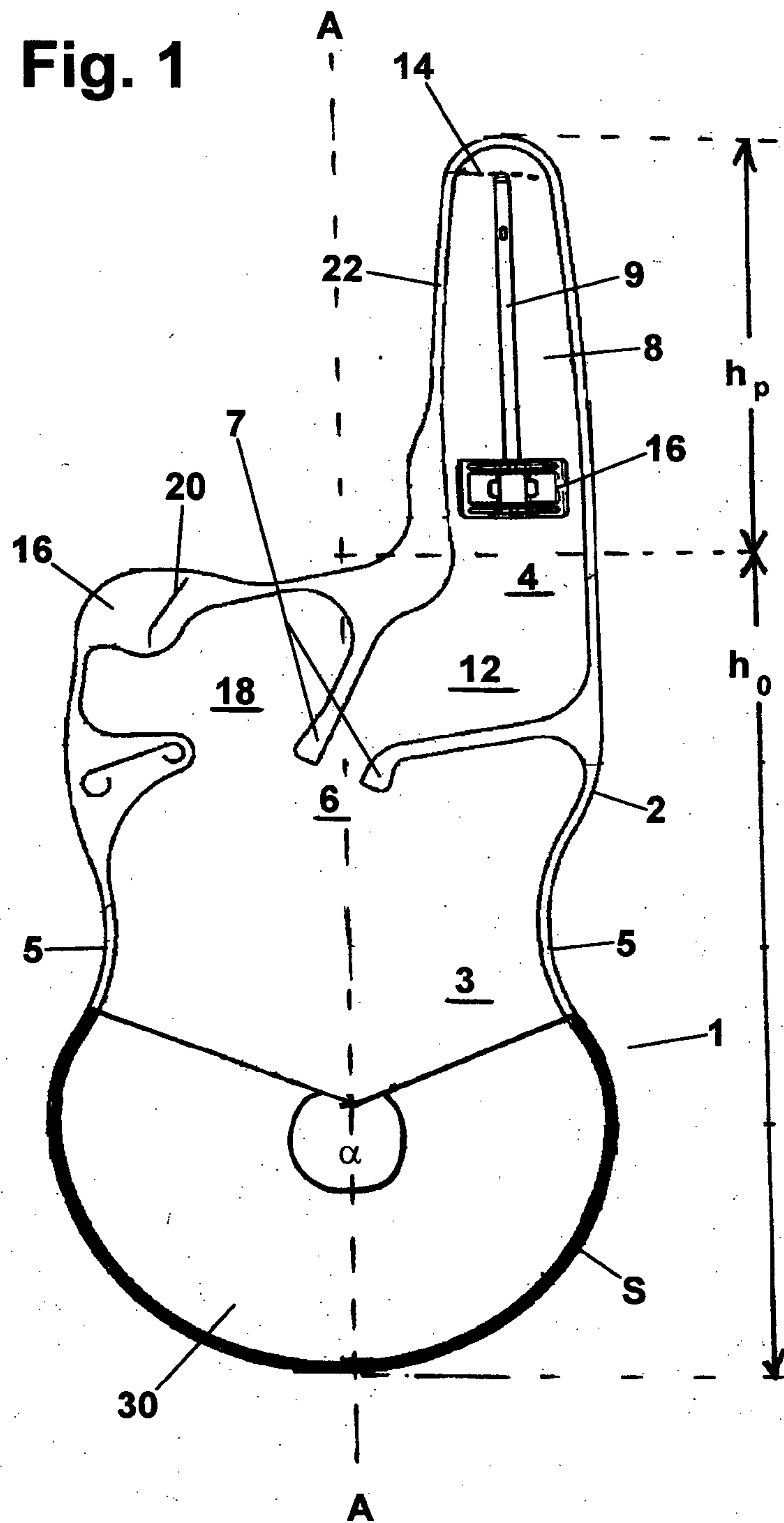
Fig. 1

Fig. 2

