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The present invention relates to a device to assist in guiding a patient from an upright position beside the bed to a lying position in a bed. The device comprises a seat member, a back support member, and a lever arm.

Fortsættes...

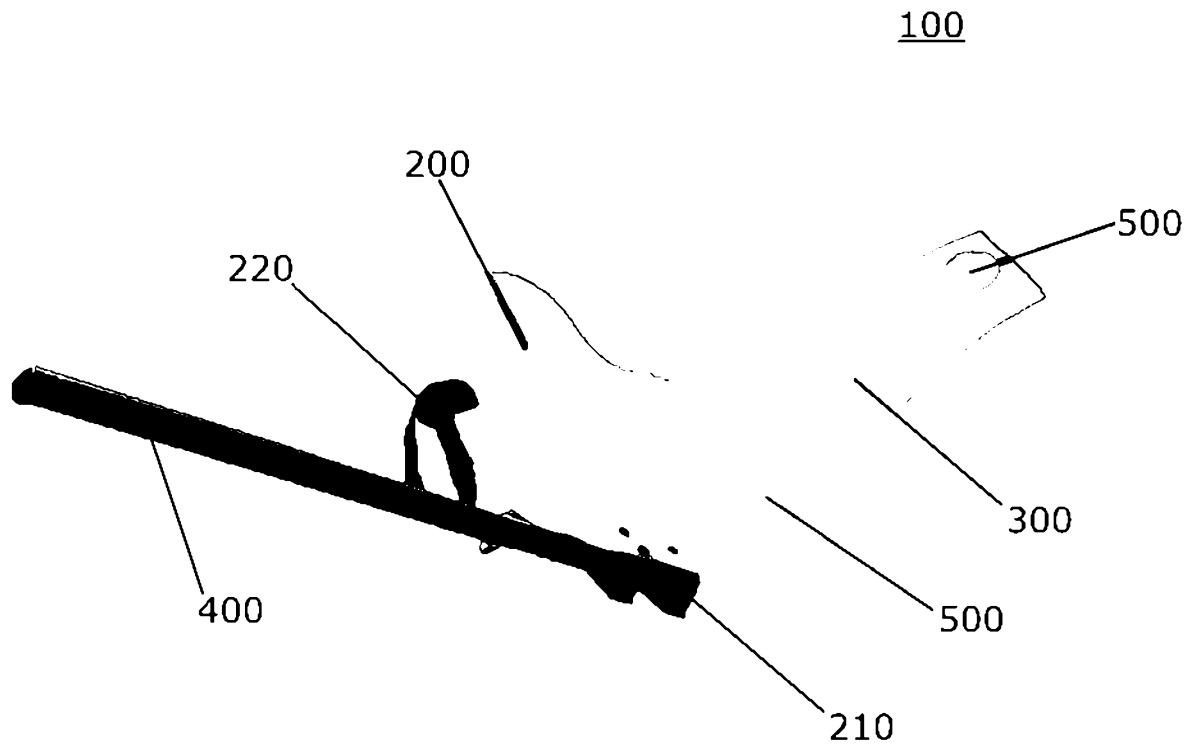


Fig. 1

Device to assist in guiding a patient from an upright position beside the bed to a lying position in a bed

Technical field of the invention

The present invention relates to a device to assist in guiding a patient from an upright position beside the bed to a lying position in a bed.

Background of the invention

Patients having mobility, or strength limitations are hindered from coming from a sitting position to a lying position on a bed, and will need help to perform this task. If this manoeuvre is performed by the nurse or carer, she or he is lifting the weight in a difficult height and position. At settings where a nurse or carer helps to carry out this task daily, be it in a hospital, special care centre, or a home, this person will be exposed to overload of the back due to non-optimal working posture.

It is therefore desirable to provide an aid, which can eliminate, or at least alleviate, the above problems.

Description of the invention

A first aspect relates to a device to assist in guiding a patient from an upright position beside the bed to a lying position in a bed, the device comprising:

- a seat member;
- a back support member; and
- a lever arm;

wherein the seat member and the back support member are arranged at an angle of 85-120 degrees to each other; wherein the lever arm extends from the front of the seat member, and from only one side of said seat member.

A second aspect relates to a device to assist in guiding a patient from an upright position beside the bed to a lying position in a bed, the device comprising:

- a seat member;
- a back support member; and
- a lever arm;

wherein the seat member and the back support member are arranged at an inner angle of 85-120 degrees to each other; wherein the lever arm is attached to the seat member and extends beyond the front of said seat member.

- 5 This device is configured for the patient to sit in, and by use of the lever arm, the nurse or carer can indirectly use the weight of the patient's torso to lift the patient's legs.

10 Preferably, the seat member and the back support member are arranged at an inner angle of 90-100 degrees to each other for the patient to sit in a comfortable position. The inner angle is to be understood as the angle between the front faces of the seat member and the back support member. In one or more embodiments, the seat member and the back support member are arranged at an inner angle of 85-120 degrees to each other, such as within the range of 90-115 degrees, e.g. within the
15 range of 95-110 degrees, such as arranged at an inner angle within the range of 100-105 degrees to each other.

The lever arm is preferably attached to the seat member, as it is the seat member that is easiest to tilt during the operation of lifting the legs.

20

In one or more embodiments, the seat member comprises attachment means adapted for releasably attachment of the lever arm to the seat member. This configuration allows for disassembly of the device during storage.

- 25 In one or more embodiments, the seat member comprises attachment means adapted for releasably attachment of the lever arm to the seat member on and/or below each side of said seat member and/or on the side edge of said seat member.

30 In one or more embodiments, the seat member comprises holding means adapted for the patient to hold on to. This configuration secures that the patient's arms will not be squeezed under the device during the unloading of the patient from the aid. Preferably, the holding means are positioned medially on and/or medially below the seat member.

The lever arm is preferably of a length such that it extends beyond the patient's knees, when the patient is sitting in the aid. Otherwise, the seat member should be sufficiently wide (wider than the patient's hip part) for the nurse or carer being able to grab the lever arm being attached at the side of the seat member. In one or more
5 embodiments, the length of the lever arm extending from the seat member is within the range of 10-150 cm, such as within the range of 15-140 cm, e.g. within the range of 20-130 cm, such as within the range of 25-130 cm, e.g. within the range of 30-120 cm, such as within the range of 35-115 cm, e.g. within the range of 40-110 cm, such as within the range of 45-105 cm, e.g. within the range of 50-100 cm, such as within
10 the range of 55-95 cm, e.g. within the range of 60-90 cm, such as within the range of 65-85 cm, e.g. within the range of 70-80 cm.

In one or more embodiments, the lever arm is telescopic. This configuration allows for the nurse or carer to adjust the length of the lever arm during the operation, e.g.
15 to compensate for confined space at different angles around the bed (i.e. the bed may be positioned close to a wall or medical equipment). Furthermore, the device will occupy little space during storage.

In one or more embodiments, the width of the back support member is narrower
20 than the widest part of the seat member. This configuration allows for easier separation of the device from the patient after use. The rear part of the seat member may also in one or more embodiments be narrower than the front part of the seat member. The back support member should be wide enough for it to support the patient's spine, such as e.g. 10-20 cm wide. Similar, the seat member should be
25 wide enough for it to support the patient's buttocks, such as e.g. 20-40 cm.

In one or more embodiments, the device further comprises a rounded section between the back support member and the seat member, wherein the rounded section bends convexly from the back face of the device. This configuration allows
30 for an easier movement and/or positioning of the device in the bed. The rounded section may be shaped by both the back support member and the seat member, e.g. such that the lower part of the back support member is rounded, and the rear part of the seat member is rounded; but it may also be a separate unit attached between the back support member and the seat member. In one or more

embodiments, the back support member, the seat member, and/or the rounded section are releasably attached to one another for easier storage.

5 In one or more embodiments, the back support member comprises one or more cut-outs of a size suitable for a nurse or carer to grab onto.

10 A third aspect relates to use of a device according to the present invention to assist in guiding a patient from an upright position beside the bed to a lying position in a bed.

15 As used in the specification and the appended claims, the singular forms "a", "an", and "the" include plural referents unless the context clearly dictates otherwise. Ranges may be expressed herein as from "about" or "approximately" one particular value and/or to "about" or "approximately" another particular value. When such a range is expressed, another embodiment includes from the one particular value and/or to the other particular value. Similarly, when values are expressed as approximations, by use of the antecedent "about", it will be understood that the particular value forms another embodiment.

20 It should be noted that embodiments and features described in the context of one of the aspects of the present invention also apply to the other aspects of the invention.

Brief description of the figures

25 Figure 1 shows a device in accordance with various embodiments of the invention; and

30 Figures 2-6 show different positions of the device during the process of guiding a patient from an upright position beside the bed to a lying position in a bed.

Detailed description of the invention

Figure 1 shows a device 100 to assist in guiding a patient from an upright position beside the bed to a lying position in a bed. The device comprises a seat member 200, a back support member 300, and a lever arm 400.

5 The seat member 200 and the back support member 300 are arranged at an inner angle of about 90 degrees to each other.

The lever arm 400 is attached to the seat member 200 via attachment means 210 and extends beyond the front of said seat member 200. The attachment means 210 is adapted for releasably attachment of the lever arm 400 to the seat member 200.

10

The seat member 200 comprises holding means 220 adapted for the patient to hold on to. The holding means 220 are positioned medially below the seat member 200, and is here configured as a strap that can be held between the patient's legs.

15 The back support member 300 comprises two cut-outs 500 of a size suitable for a nurse or carer to grab onto.

Figure 2 shows the first position (on the edge of the bed) that the device is positioned in during the operation. At this position, the patient (not shown) is instructed to sit onto the seat member. The nurse or carer (not shown) can be
20 imagined located to the right of the device, holding the lever arm; optionally with the right hand on the back support member, and the left hand on the lever arm. The nurse or carer thereby stands sideways to the bed, and with the front facing the patient. The patient is then instructed to lean backwards in the device, while the
25 nurse or carer lifts the lever arm (Figure 3). Thereby, it is primarily the weight of the patient's torso that lifts the patient's legs, with minimal load on the nurse or carer. In Figures 4+5, the device is turned by the nurse or carer (not shown) by using his/her body to push the lever arm in a forward movement (to the left of the figure). As the patient's legs are already lifted, the patient is automatically positioned over and
30 along the bed. In Figure 6, the device is finally tilted such that the patient lies on the side. The device can then be removed. The tilting operation may be a collaboration between the patient and the nurse or carer, or may be a sole operation by the nurse or carer, if the patient has little strength. In both situations, the lever arm is moved towards the other side of the bed.

References

- 100 Device
- 200 Seat member
- 5 210 Attachment means
- 220 Holding means
- 300 Back support member
- 400 Lever arm
- 500 Cut-out

10

Claims

1. A device (100) to assist in guiding a patient from an upright position beside the bed to a lying position in a bed, the device comprising:

- a seat member (200);

5 - a back support member (300); and

- a lever arm (400);

wherein the seat member (200) and the back support member (300) are arranged at an inner angle of 85-120 degrees to each other; wherein the lever arm (400) is

attached to the seat member (200) and extends beyond the front of said seat

10 member (200).

2. A device (100) according to claim 1, wherein the seat member (200) comprises attachment means (210) adapted for releasably attachment of the lever arm (400) to the seat member (200).

15

3. A device (100) according to claim 1, wherein the seat member (200) comprises attachment means (210) adapted for releasably attachment of the lever arm (400) to the seat member (200) on and/or below each side of said seat member (200) and/or on the side edge of said seat member (200).

20

4. A device (100) according to any one of the claims 1-3, wherein the seat member (200) comprises holding means (220) adapted for the patient to hold on to.

5. A device (100) according to claim 4, wherein the holding means (220) are positioned medially on and/or below the seat member (200).

25

6. A device (100) according to any one of the claims 1-5, wherein the length of the lever arm (400) extending beyond the seat member (200) is within the range of 10-150 cm.

30

7. A device (100) according to any one of the claims 1-6, wherein the width of the back support member (300) is narrower than the seat member (200).

8. A device (100) according to any one of the claims 1-7, further comprising a rounded section between the back support member and the seat member, wherein the rounded section bends convexly from the back face of the device.

5 9. A device (100) according to any one of the claims 1-8, wherein the lever arm (400) is telescopic.

10. Use of a device according to any one of the claims 1-9 to assist in guiding a patient from an upright position beside the bed to a lying position in a bed.

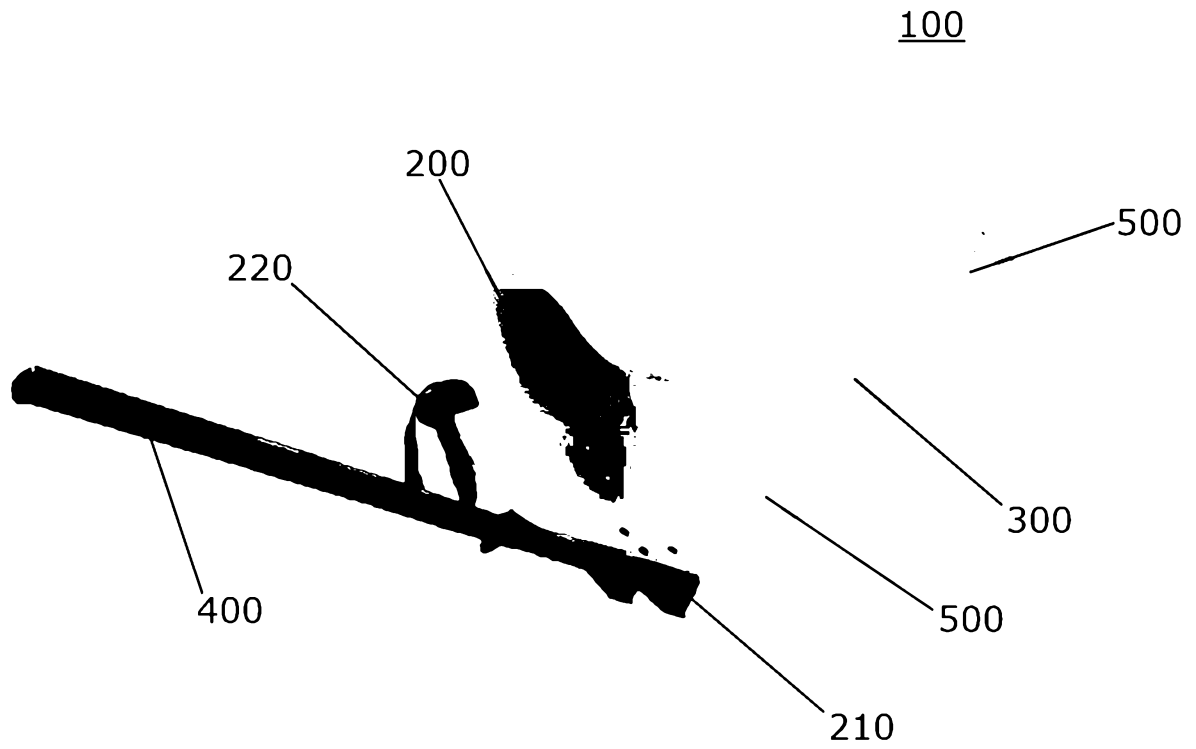


Fig. 1

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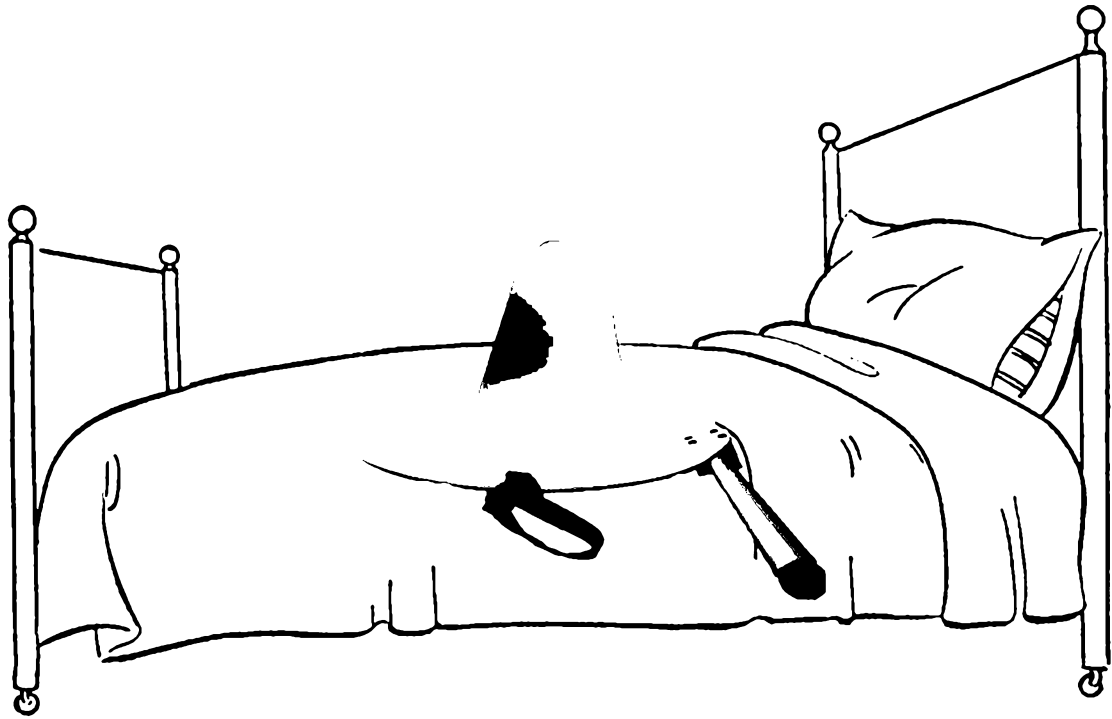


Fig. 2

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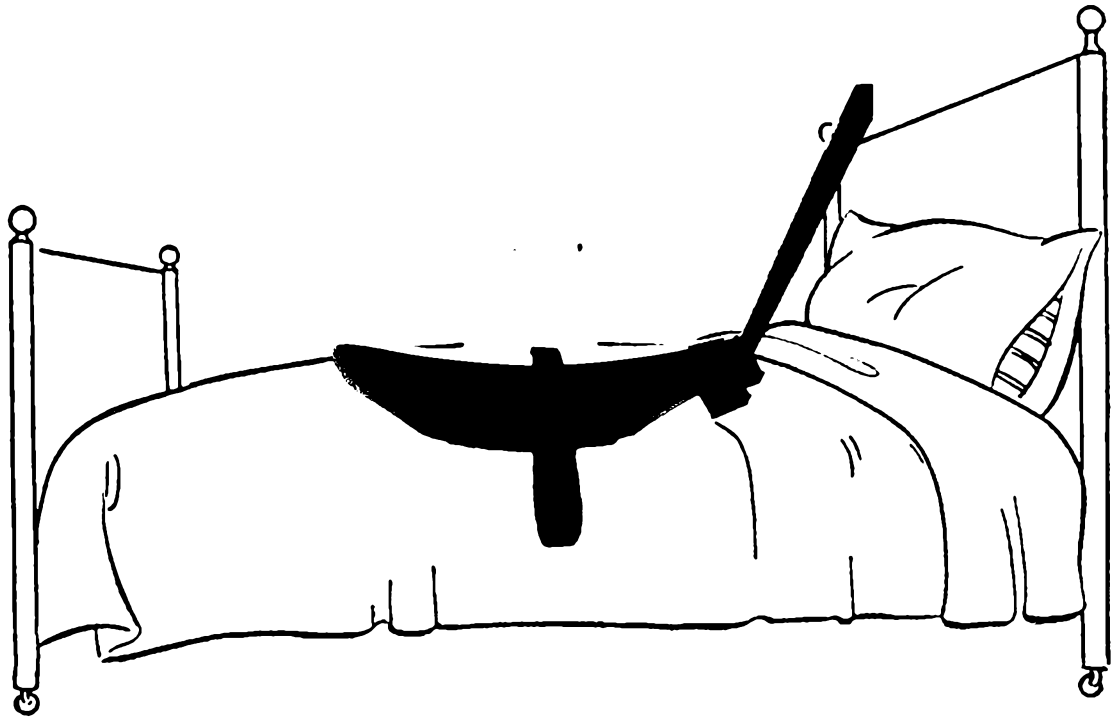


Fig. 3

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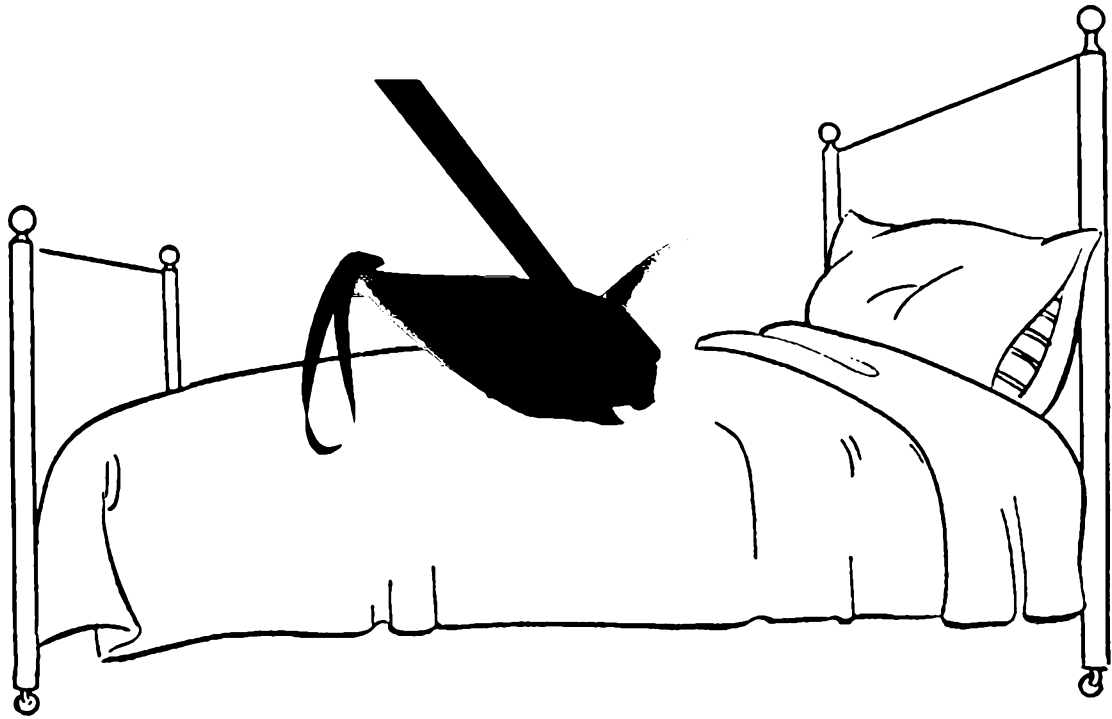


Fig. 4

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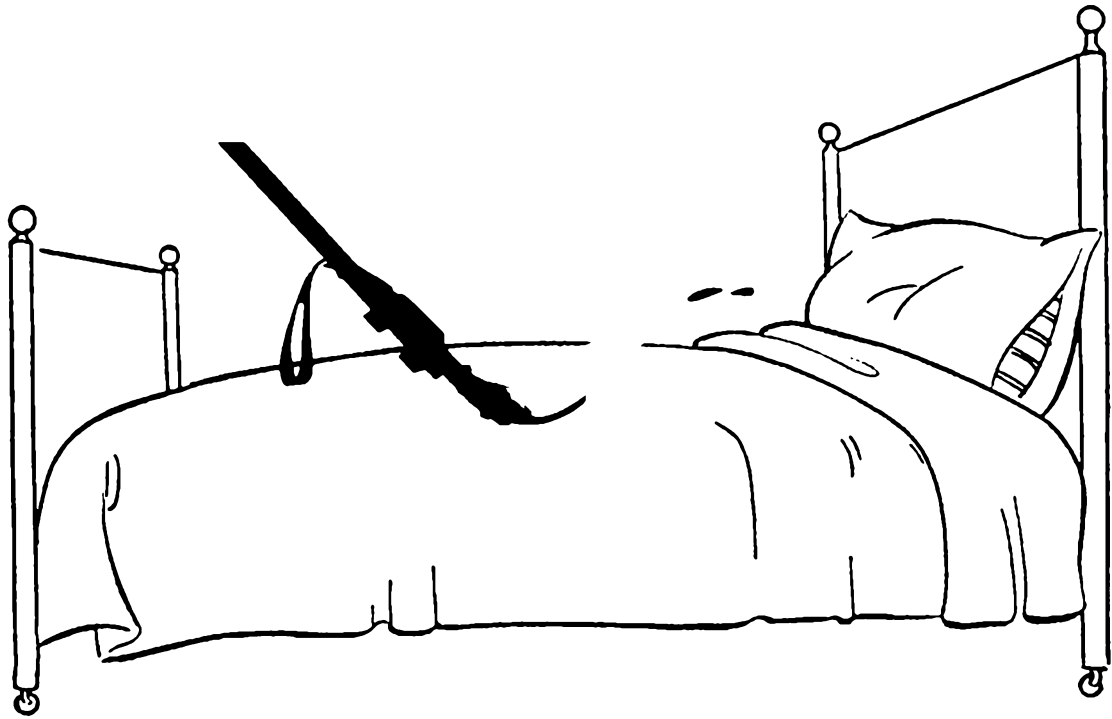


Fig. 5

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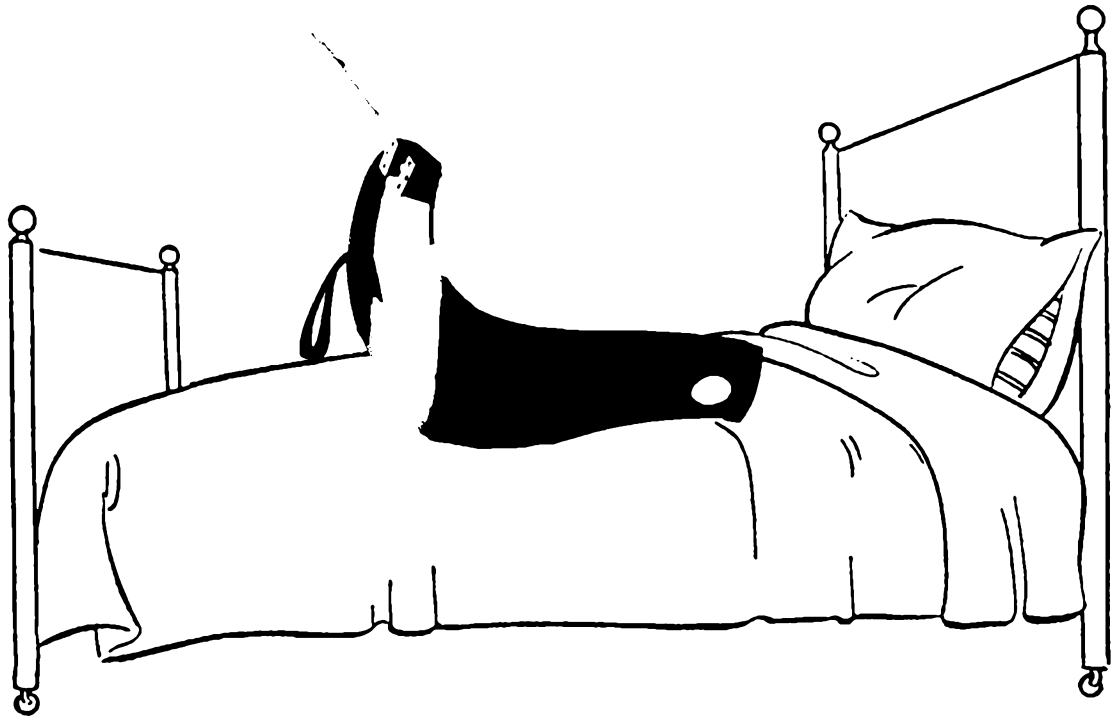


Fig. 6