CLOSURE FOR A COVER ON A MATTRESS AND THE LIKE

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This results in a strong and liquid-tight closure so that the mattress may be washed/cleaned in a washing machine.
CLOSURE FOR A COVER ON A MATTRESS AND THE LIKE

STATE OF THE ART

[0001] The invention relates to a closure for a cover on a mattress, pillow or the like, which closure must be liquid-tight so that the mattress may be washed without the mattress getting wet by this washing/disinfection. Mattresses, including hospital mattresses, must be washed regularly together with the beds in order to satisfy the necessary requirements of hygiene.

[0002] This washing takes place in automatic washing systems, in which the mattresses are advanced edgeways through a type of washing tunnel. During the passage of this, detergent water is first applied to the mattresses, which are then flushed clean.

[0003] For the desired hygiene to be achieved, no water may penetrate through the cover to the mattress itself. It is therefore necessary to mount the cover flexibly on the mattress, i.e. without any possibility of opening and closing the cover to thereby avoid ingress of water via e.g. zippers or button systems.

[0004] This therefore makes it impossible to use exchangeable covers, since the known closure means are not water-tight, and thus such mattresses cannot be used in connection with the washing systems.

[0005] GB 2 267 933 A discloses a closure system comprising two parts which, when pressed together, can engage each other to form a liquid-tight closure.

[0006] This closure, however, is not suitable for mattresses, since it does not constitute a safe closure, but rather a closure which can be opened completely or partly.

[0007] Consequently, there is no certainty of the parts being held together and thereby liquid-tight when e.g. a mattress is to be washed.

[0008] To this should be added that the parts cannot readily be attached to the cover.

OBJECT OF THE INVENTION

[0009] The object of the invention is to remedy the above-mentioned defects and drawbacks, while ensuring that all necessary requirements of comfort may be maintained.

[0010] This is achieved according to the invention in that the closure comprises partly a longitudinal strip which is secured to the cover and extends over the slot opening in the cover, and which is provided with a gripping rib outermost and a holding rib mounted over the slot, respectively, and partly a strip insertable thereon, said strip having gripping parts extending around the gripping ribs and holding parts extending around the holding ribs, respectively.

[0011] Hereby, a strip may be secured to the cover first, preferably in that it is heat-welded in its full extent, which in practice means the length of the opening in the cover needed by the mattress in order for the cover to be mounted on the mattress.

[0012] When this strip has been mounted, the opening is cut by cutting the strip as well as the cover between the two holding ribs centrally on the strip. Then, the mattress may be inserted, following which a closure strip may be inserted so that its gripping parts grip the outwardly extending parts on the strip with the slot opening. As a result, the closure strip closes the slot opening completely water-tight when the strips are then welded together at the ends.

[0013] This provides a strong and safe closure which ensures that no water can penetrate through the closure to the mattress during washing in a washing machine.

[0014] When, as defined in claims 2 and 3, the strip is made of plastics having suitable physical properties, one strip may be heat-welded to the cover, and the strips may be closed at the ends by fusion.

[0015] When, as defined in claim 4, the slot opening is formed after the one strip has been mounted on the cover, the mounting is more accurate since the strip is undivided at the moment of mounting.

[0016] Finally, as defined in claim 5, it is expedient to mount the closure on the side face of the mattress where it does not interfere.

THE DRAWINGS

[0017] In example of an embodiment of the invention will be described more fully below with reference to the drawing, in which

[0018] FIG. 1 shows a mattress with a closure mounted on the end face,

[0019] FIG. 2 shows a section through the closure on an enlarged scale in the direction II-II in FIG. 1, and

[0020] FIG. 3 shows the closure seen from the outside.

DESCRIPTION OF AN EMBODIMENT

[0021] The embodiment comprises a mattress which may be constructed in any known manner, comprising e.g. a mattress insert of a resilient type which is wrapped in a cover as shown in FIG. 1.

[0022] The cover 3 is provided with a closure 2 according to the invention at one end face of the mattress.

[0023] The closure is constructed such that the mattress insert may be inserted through an opening in the cover, so that the closure 2 can then seal the cover. This ensures that the mattress with a cover may be washed in a washing machine with flushing water without any risk of water penetrating through the cover to the mattress insert.

[0024] The closure 2 itself is constructed as appears from the sectional view in FIG. 2.

[0025] A strip 9 is first secured at the selected place on the cover 3, said strip being preferably made by extrusion of a soft plastics material, such as TPU. The cross-sectional shape of the strip is as shown. This is composed of a base plate 9 which forms an engagement face for the cover 3. The strip may be secured to the cover by heat fusion or adhesion in any known manner.

[0026] Four projections protrude from the base face 9, viz. outermost two gripping ribs 5 and innermost two holding ribs 4, said latter holding ribs extending between the subsequently formed slot opening 8.
**[0027]** The strip with the ribs is mounted on the cover in the length which the opening is to have for the cover to be applied to the mattress.

**[0028]** Then the strip 9 and the cover 3 are cut between the holding ribs 4 to form the opening 8, as shown in FIG. 2.

**[0029]** When the cover 3 is then arranged on the mattress, the strip is closed and thereby the opening by means of a slide strip 6, which is preferably made by extrusion of a relatively rigid material, such as ABS plastics.

**[0030]** The shape of the strip 6 is such that outermost it is shaped as a gripping part 2 which encloses the gripping rib 5. At the center there are three holding parts 11 which extend around and between the two holding ribs 4. When this strip 6 has been inserted over the strip 9 secured to the mattress, the strips are locked together and thereby completely liquid-tight.

**[0031]** The closure is terminated by the strips being welded together at the ends 7, as indicated in FIG. 3, to thereby provide a totally liquid-tight closure.

**[0032]** Closed in this manner, the mattress can withstand machine-washing, without any risk of washing water penetrating through the cover and into the mattress insert.

**[0033]** The closure is relatively inexpensive to produce and mount, and it has no adverse influence at all on the use or comfort of the mattress.

1. A closure (2) for a cover (3) on a mattress, pillow or the like (1), which closure (2) must be liquid-tight so that the mattress (1) may be washed without the mattress (1) getting wet during this washing/disinfection,

   characterized in that the closure (2) comprises partly a longitudinal strip (9) which is secured to the cover (3) and extends over the slot opening (8) in the cover, and which is provided with a gripping rib (5) outermost and a holding rib (4) mounted over the slot (8), respectively, and partly a strip (6) insertable thereon, said strip having gripping parts (10) extending around the gripping ribs (5) and holding parts (11) extending around the holding ribs (4), respectively.

2. A closure according to claim 1, characterized in that the strip (9) and the ribs (4, 5) are made of plastics, such as TPU, and that the slide, the closure strip (6) with the parts (10, 11) is made of plastics, such as ABS.

3. A closure according to claims 1 and 2, characterized in that the strips (6, 9) are closed at the ends by means of a heat weld (7) after the mounting.

4. A closure according to any one of claims 1-3, characterized in that the slot opening (8) in the cover (3) is formed after the strip (9) has been secured to the cover (3).

5. A closure according to claims 1-4, characterized in that the closure (2) is mounted on one of the side faces of the mattress (1), such as the end face (3).