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(54) **A device for dismounting a mop**

(57) The invention relates to a mop release (101) for use in connection with a mop from a cleaning unit (201), wherein the cleaning unit comprises a shaft portion (203) and a mop frame with end flaps (204) that are, in a collapsed state, tilted at an angle, and wherein the end flaps (204) can, by a locking device (205), be securely locked in succession of each other in a stretch-mounted state. The end flaps (204) can be brought from the stretch-mounted state to the collapsed state by deactivation of the locking device (205). The mop frame is of the type that secures the mop (206) in that the end flaps (204) of the mop frame engage in pockets (207) on the mop and secure the mop when the mop frame is in the stretch-mounted state. The mop release (101) comprises a slot (103) delimited by two sides and adapted for introduction of the shaft portion (203) and swivel unit (202) of the cleaning unit (201) and between said two sides; said mop release (101) further comprising deactivation means (104) adapted for deactivation of the locking device (205) of the mop frame when the locking device is brought into contact with said deactivation means following introduction of the shaft portion of said cleaning unit into said slot.

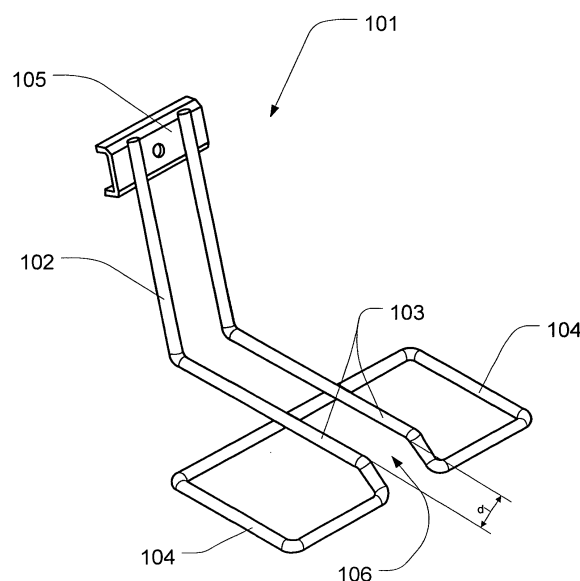


Fig. 1

Description

[0001] The invention relates to a mop release for use in connection with the dismantling of a mop from a mop frame.

Background

[0002] Within the field of cleaning various types of cleaning units are known that comprise a shaft part with a mop frame on which a mop is attached. Typically, the mop is constituted of a piece of textile of eg cotton or synthetic material. The mop frame is typically configured such that the mop can be exchanged as needed, eg when the mop has become soiled. Within the cleaning industry it is necessary to enable swift and simple exchange of the mop whereby both time and strength are saved. It is a further problem that, during cleaning, it is required to exchange the mop relatively often, and therefore it is important that the exchange procedure as such is easy on the individual performing it.

[0003] The shaft portion of the cleaning unit comprises a shaft, a swivel joint and an attachment device. The attachment device and the swivel joint are often configured as an integral part of the top face of the mop frame, and the shaft is adapted to be attached to the attachment device. According to other embodiments the swivel joint is configured integrally with the shaft, where the swivel joint is adapted to be attached to the attachment device which is integrated as a part of the top face of the mop frame.

[0004] The attachment mechanism for attachment of the mop to the mop frame can be configured by providing the mop with pockets at both ends and allow the mop holding means of the mop frame to comprise two collapsible end flaps that may have a stretch-mounted state and a collapsed state. The pockets of the mop are taken across these end flaps when collapsed at an angle to the mop frame. Then the end flaps can be folded upwards to a locked position in which the end flaps are situated in succession of each other, whereby the mop is secured to the mop frame. The end flaps are locked by means of a locking device, and when the mop is again to be exchanged, the locking device is deactivated, whereby the end flaps can be collapsed again, and the mop can be dismantled for exchange and/or cleaning.

[0005] In connection with exchange of the mop, this kind of attachment device requires that the locking device is deactivated on the top face of the mop frame, following which exchange of the mop can be accomplished. Usually the user must deactivate the locking device by his hands or his foot. When the person in question deactivates the locking device with his foot, the person in question will have to bend over to collect the mop, which strains in his back. It is a further drawback of the above system that the user is in close contact with the soiled mop during the exchange procedure, due to the user often using his hands to remove or collect the soiled mop.

The result is that the user is exposed to a health hazard due to the soiled mop containing impurities and bacteria.

Object and description of the invention

[0006] The object of the invention is to solve the problems described above.

[0007] This is accomplished by a mop release for use in connection with the dismantling of a mop from a cleaning unit, wherein the cleaning unit comprises a shaft part and a mop frame with end flaps that are, in a collapsed state, tilted at an angle, and wherein the end flaps with a locking device can be securely locked in succession of each other in a stretch-mounted state. The end flaps are taken from the stretch-mounted state to the collapsed state by deactivation of the locking device. The mop frame is of the type that secures the mop by the end flaps of the mop frame engaging in pockets on the mop and secures the mop when the mop frame is in the stretch-mounted state. The mop release comprises a slot delimited by two sides and adapted for introduction of the shaft portion and swivel unit of the cleaning unit between said two sides. The mop release further comprises deactivation means adapted for deactivating the locking device of the mop frame when the locking device is brought into contact with said deactivation means following introduction of the shaft portion of the cleaning unit into said slot. Hereby it is accomplished that the user of a cleaning unit is able to automatically dismantle the mop from the mop frame without having to get into contact with the soiled mop. This can be solved in particular by arrangement of the mop release above a container adapted for storing soiled mops. Owing to gravity, the mop will automatically drop down into the container when the locking device of the mop frame is deactivated by the mop release, whereby it is avoided that the user has to bend over and collect the soiled mop.

[0008] According to a further embodiment, the mop release comprises further attachment means adapted for being attached on a cleaning cart. Hereby the advantageous aspect is accomplished that the mop release can be attached on a cleaning cart and may therefore easily be transported along with the remaining cleaning equipment used by the user of the cleaning unit during the cleaning procedure. Simultaneously the mop release on the cleaning cart can advantageously be mounted above a container for storing soiled mops as described above.

[0009] According to a further embodiment of the mop release, at least a part of said mop release is made of metal wire. This means that the manufacture of the mop release is simple and easy since the mop release can be bent from the metal wire. Finally the metal wire means that the mop release can be configured as a light unit whereby the weight of the cleaning cart is limited.

[0010] According to a further embodiment of the mop release, at least a part of said mop release is made of stainless steel or plastics. Hereby the advantageous aspects are accomplished that the mop release can be

manufactured from materials that are resistant to cleaning products and are furthermore easy to clean in case the mop releaser is soiled.

[0011] Moreover, the invention relates to a cleaning cart comprising a mop release as described by one or more of the above embodiments. Hereby the same advantages are obtained as were described above.

BRIEF DESCRIPTION OF DRAWINGS

[0012] In the following, the invention is described with reference to the figures, in which:

Figure 1 shows an embodiment of the mop release according to the invention;

Figure 2 shows a use of the mop release for the exchange of a mop cloth on a mop frame.

DESCRIPTION OF EMBODIMENTS

[0013] Figure 1 shows an embodiment of the mop release (101) according to the invention. The mop release is, in this embodiment, bent from metal wire and comprises an attachment part (102), a slot part (103), and deactivation parts (104). On the attachment part of the metal wire an attachment fitting (105) is secured by welding and is adapted for being secured to a metal bar on a cleaning cart (not shown) via a screw and a nut. The attachment part is in connection with a slot part (103), where the sides of the slot are constituted by the metal wire which has been bent such that the distance (d) between the sides is adapted for the shaft portion of a cleaning unit to be able to enter the slot (106). The deactivation part (104) is configured as a square loop and is connected to the slot part. The size of the square loop is constructed such that a part of the loop will come into contact with the locking device of the mop frame when the shaft portion of the cleaning unit is introduced into the slot and an upward pull is subsequently exerted in the shaft portion until the mop frame comes into contact with the mop release. This process is illustrated in Figure 2.

[0014] Figure 2 shows a use of the mop release for exchange of a mop on a cleaning unit. Figure 2a shows the mop release (101) and the cleaning unit (201) seen from above. The cleaning unit comprises a mop frame and a shaft portion. The shaft portion comprises an attachment device (202) with a swivel joint (213) on which a shaft is mounted. In this embodiment the attachment device and the swivel joint are integrated as a part of the top face of the mop frame, and the mop frame comprises two end flaps (204) and a locking device (205). The mop frame is in its stretch-mounted state where the end faces are locked in succession of each other via the locking device (205), and simultaneously a mop (206) is secured by the end faces being inserted into pockets on the mop (207). When the user of the cleaning unit wishes to replace the mop, the shaft portion of the cleaning unit is

introduced into the slot (104) of the mop release, as shown by arrow (208). Then an upward pull is exerted in the shaft portion as shown by arrow (209) in Figure 2b that shows the mop release and the mop frame, seen from the side. When an upwards pull is exerted in the shaft portion, the deactivation portion (105) will be brought into contact with the locking device (205) of the mop frame, whereby the locking device is deactivated as shown by arrow (210). The result is shown in Figure 2c which shows how, due to the influence of gravity, the end flaps will collapse as shown by arrows (211). The pockets (207) of the mop will then be pulled off the end flaps and thereby become dismounted from the mop frame as shown by arrow (212).

[0015] Advantageously, the mop release can be secured on a cleaning cart, where it is arranged above a bucket to the effect that the mop will drop into the bucket when it is dismounted from the mop frame. The mop release can also be adapted to a mop frame, where only the one end face can be tilted. The mop release can be configured from a wire of stainless steel which is durable and able to withstand water, which is advantageous in that the mop release is used in the context of cleaning.

Claims

1. A mop release for use in connection with the dismounting of a mop from a cleaning unit, wherein the cleaning unit comprises a shaft portion and a mop frame with end flaps that are, in a collapsed state, tilted at an angle, and wherein the end flaps with a locking device can be securely locked in succession of each other in a stretch-mounted state, and the end flaps are brought from the stretch-mounted state to the collapsed state by deactivation of the locking device, said mop frame being of the type that secures the mop in that the end flaps of the mop frame engage in pockets on the mop and secure the mop when the mop frame is in its stretch-mounted state, **characterised in that** said mop release comprises a slot delimited by two sides and adapted for introduction of at least a portion of the shaft portion of the cleaning unit between said two sides; said mop release comprising further deactivation means adapted for deactivating the locking device of the mop frame, when the locking device is brought into contact with said deactivation means following introduction of at least a part of the shaft portion of the cleaning unit into said slot.
2. A mop release according to claim 1, **characterised in** further comprising attachment means adapted for attachment of said mop release onto a cleaning cart.
3. A mop release according to one or more of claims 1-2, **characterised in that** at least a part of said mop release is made of metal wire.

4. A mop release according to one or more of claims 1-3, **characterised in that** at least a part of said mop release is made of stainless steel.
5. A mop release according to one or more of claims 1-4, **characterised in that** at least a part of said mop release is made of plastics. 5
6. A cleaning cart comprising a mop release described by one or more of claims 1-5. 10

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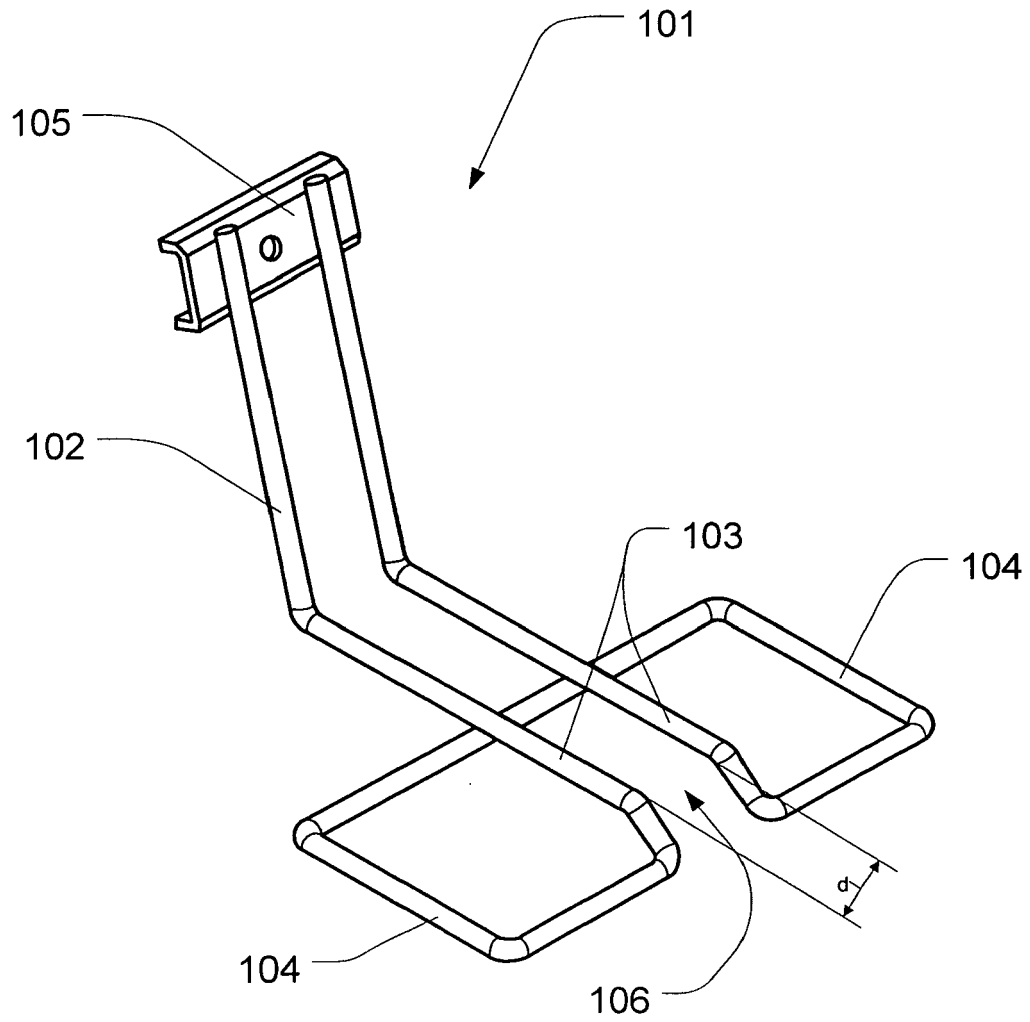


Fig. 1

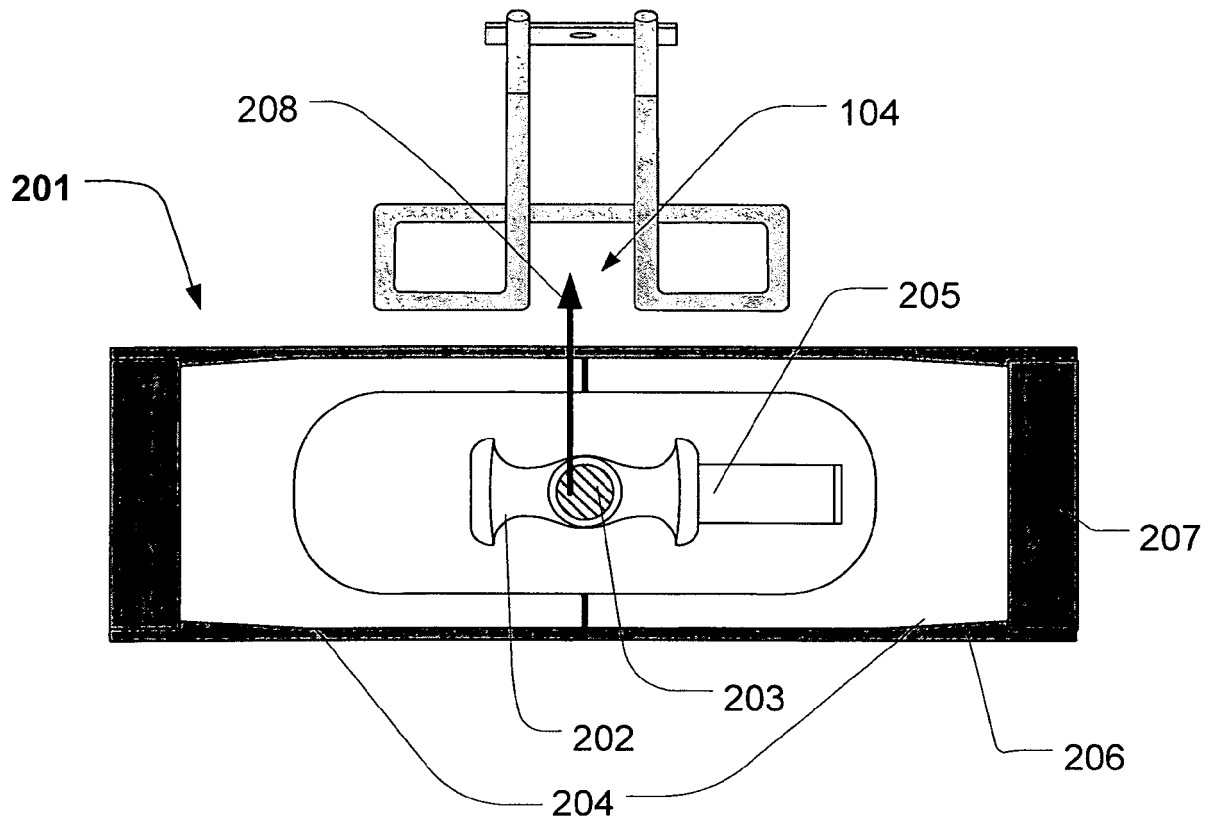


Fig. 2a

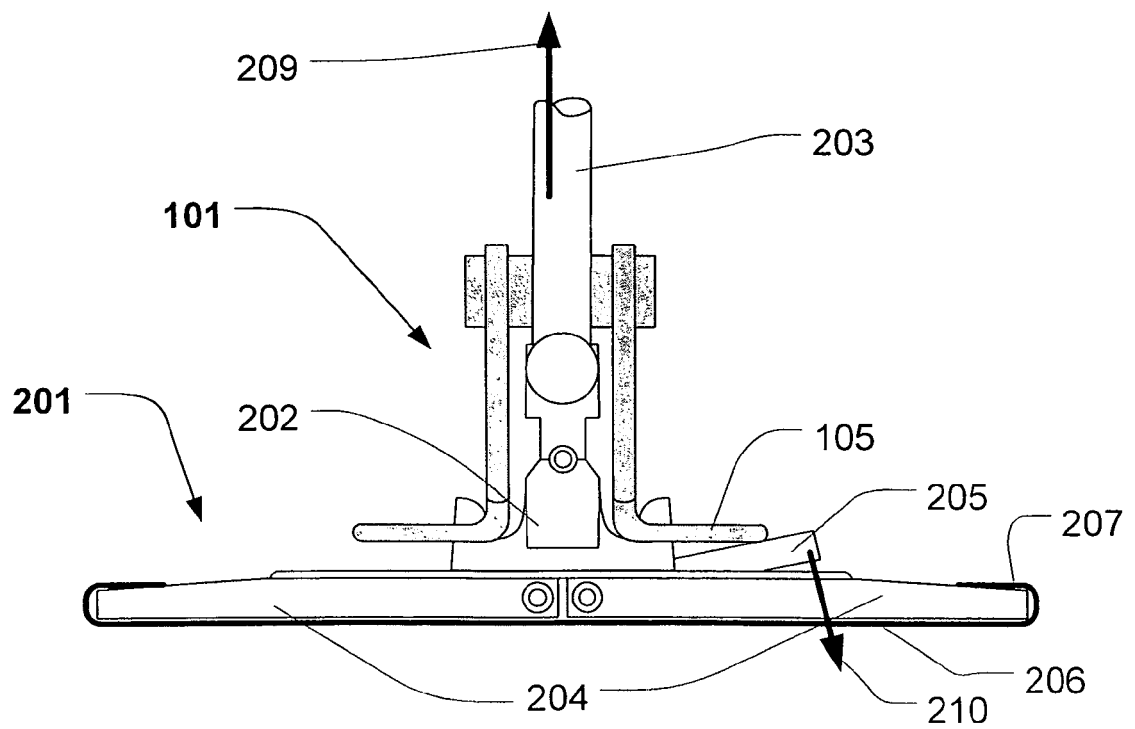


Fig. 2b

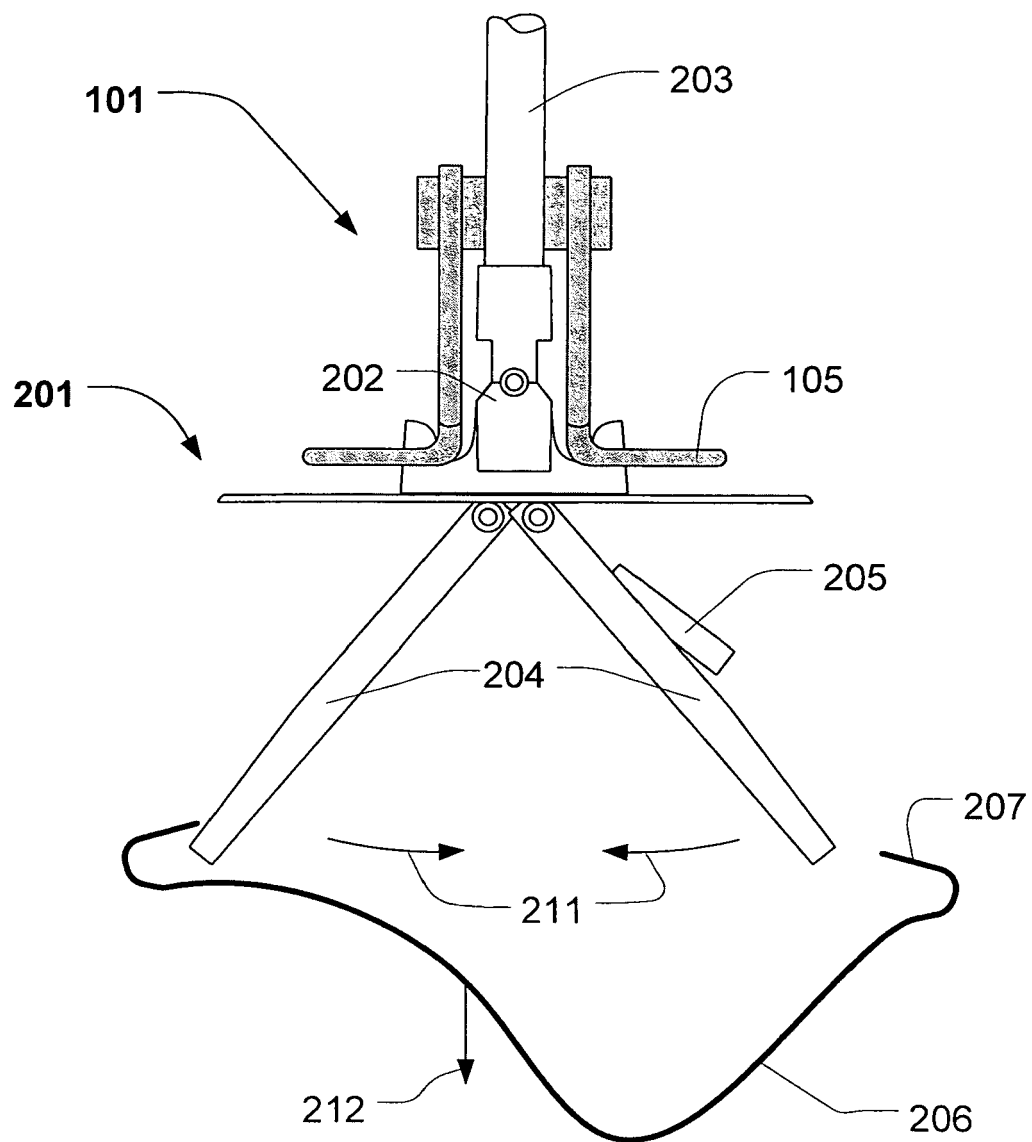


Fig. 2c