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(73) Patenthaver: **Flexi-Bogdahn Technik GmbH & Co. KG, Carl-Benz-Weg 13, 22941 Bargteheide, Tyskland**

(72) Opfinder: **Bogdahn, Manfred, Up de Worth 7, 22391 Hamburg, Tyskland**
**Schmidt, Michael, Lautensackstraße 9, 80687 München, Tyskland**

(74) Fuldmægtig i Danmark: **Zacco Denmark A/S, Arne Jacobsens Allé 15, 2300 København S, Danmark**

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The invention relates to a grip for grasping with one hand, in particular for holding a leash device for rolling up and unrolling a leash for leading an animal, having a rigid gripping part.

A grip of this type is known for example from DE 299 04 882 U1. Herein, the grip is designed as an integral component of a housing for a leash device. The leash device has a leash, which can be rolled up and unrolled, for leading an animal, for example, a dog or a cat. The grip allows the leash device to be carried with one hand.

The disadvantage here is that the length of the rigid gripping part is fixed. Consequently, a gripping part needs to be provided that can be used as universally as possible, namely for as many different hand sizes and/or hand widths as possible. However, there is a risk here that the carrying comfort is insufficient, particularly for people with smaller hands and/or hand width. As an alternative, it is also conceivable to provide a plurality of different grips with different lengths for the gripping part for different hand sizes and/or hand widths. Consequently, the production and inventory cost is considerably increased, however.

US 2011/0083617 A1 discloses a leash device, in which one end of a gripping piece is detachable from a leash housing, in order to be able to fasten the leash device to a post, for example. For this purpose the end opposite the detachable end of the gripping piece is pivotably mounted, whereby a controlled handling of the leash device with a detached gripping piece is considerably more difficult.

Therefore, the invention is based on the problem of further developing a grip of the type mentioned in the preamble, such that the grip makes possible a high carrying comfort for people with different hand sizes and/or hand widths.

To solve the problem on which the invention is based the grip of the type cited in the preamble is characterised in that an adjustable grip length limitation is provided for setting a grip length for different hand widths and that a grip strap, connected to the gripping part, is provided that is designed as one piece with

the gripping part, wherein the grip strap and the gripping part form a grip opening for at least partially passing fingers through, and the grip length limitation is arranged within the grip opening.

Advantageously, this allows that the same grip can be adjusted for people with different hand sizes and/or hand widths. Thus, a grip size position is feasible for any hand size and/or hand width, and is associated with a sufficiently high carrying comfort. Thus, because of the rigid gripping part, the grip is also sturdy and allows a more secure hold. The grip length can be adjusted because of the additional adjustable grip length limitation. The grip length can preferably be adjusted by means of the grip length limitation in an area of the gripping part that is associated with the hand when using a hand edge and/or a little finger. Consequently, because of the adjustability of the grip length limitation, it can be guaranteed that a grip size position is feasible, in which the hand edge and/or the little finger can be placed at the grip length limitation. This enables a more secure hold of the grip and/or the gripping part. In the present case, the little finger is defined as being the finger between a ring finger and the hand edge. The grip length limitation can preferably be fixed in the respective grip size position, especially by means of a fixing means.

According to another embodiment the grip length limitation can be adjusted and/or positioned in the longitudinal direction of the gripping part by means of an adjusting mechanism. The adjusting mechanism enables the grip length limitation to be continuously and/or intermittently adjusted and/or positioned, especially between two stops. In this way, discrete, pre-set grip size positions or continuously variable grip size positions are feasible. The adjusting mechanism can have a mechanical, electric and/or electromechanical design. Preferably, the grip length limitation has a U-shaped design. In particular, the gripping part has a hand surface gripping side to at least partially place a hand inner surface, and a finger gripping side to at least partially place finger inner surfaces. A more secure hold of the rigid gripping part in the hand is thereby achieved when using the grip.

In particular, the grip length limitation is arranged such that a little finger and/or hand edge can at least partially encompass the gripping part. Consequently, an even more secure hold of the grip in the hand can be guaranteed. Consequently, the grip lies securely in the hand especially in a leash device, which is subjected to tension during use, for example, when leading an animal.

A grip strap is provided which is integrally connected to the gripping part. In particular, the grip strap has a rigid design. The grip strap and/or gripping part are preferably designed as integral components of a housing of a leash device. The grip strap especially faces towards a finger gripping side of the gripping part. Consequently, the fingers, especially the outsides of the fingers, are protected. A housing part for a leash roller can be arranged in an area of the grip strap facing away from the finger gripping side. In use, the leash or leash roller is positioned in front of the hand of the person holding the grip. This results in a good functionality of the leash device with a simultaneously high carrying comfort.

In particular, a grip opening, through which fingers may be at least partially passed, is formed by the grip strap and the gripping part. The grip opening is preferably enclosed by the grip strap and the gripping part. This results in a particularly stable construction. In particular, the grip length limitation is arranged inside the grip opening. The maximum grip size position can be pre-set by the size of the grip opening. Grip size positions that are smaller than the maximum grip size position can be obtained by means of the adjustable grip length limitation. To this end, the grip length limitation is preferably adjustable within the grip opening.

According to another embodiment, in a maximum grip size position, the grip length limitation is at least partially integrated into the gripping part and/or into the grip strap. In this way, particularly attractive aesthetic shapes can be obtained. In addition, a reduction in the maximum grip size position can be avoided by the presence of the grip length limitation. The grip length limitation is preferably adjustable in order to reduce the grip size position in the

longitudinal direction of the gripping part. Consequently, the grip length can be effectively and easily adjusted for different hand widths.

The adjusting mechanism is preferably designed as a displacing mechanism and/or as a pivoting mechanism. In a displacing mechanism, the grip length limitation is displaceable, especially in the longitudinal direction of the gripping part. In a pivoting mechanism, the grip length limitation is pivotable. In particular, the adjusting mechanism is designed as a combination of a displacing and a pivoting mechanism. In this regard, the grip length limitation is both displaceable and pivotable. The pivoting and displacing may take place independently of each other or simultaneously with each other. A plurality of adjusting mechanisms can thereby be obtained. With a pivoting mechanism, a pivot axis that is associated in particular with the gripping part or grip strap and/or is displaceable with the displacing mechanism is preferably provided for pivoting the grip length limitation. The pivot axis may be designed in a material form or be provided as a virtual pivot axis, about which the grip length limitation is pivotable.

According to a development, an actuating element is provided to actuate the adjusting mechanism. The actuating element may be designed as a button, a rotating wheel or a knurled wheel. The actuating element is preferably associated with the gripping part, grip strap or grip length limitation. In particular, the provided actuating means is suitably positioned for actuation with at least one finger of the hand while the grip is being held by the hand. The actuating element is preferably designed for actuation with the thumb of the hand that holds the grip or gripping part during use. This allows a simple, comfortable and quick operability and/or adjustability of the grip size.

According to another embodiment, the displacing mechanism and/or pivoting mechanism possess a gear mechanism, locking mechanism and/or clip mechanism. In this way, a plurality of different adjusting mechanisms can be obtained. In a locking mechanism, first locking elements and/or a locking strip, which cooperate in particular with at least one second locking element and/or locking parts of the grip length limitation, are preferably arranged in the area of

the gripping part and/or of the grip strap. Pre-set grip size positions can be adjusted by means of such a locking mechanism.

The displacing mechanism preferably has a spindle arranged in the gripping part or grip strap. The spindle is especially rotatably mounted within the gripping part or grip strap. Preferably, the spindle is aligned, with respect to its longitudinal alignment, in, and especially parallel to, the longitudinal alignment of the gripping part or grip strap. The spindle can be actuated by means of an actuating element, especially a rotating wheel, for adjusting the grip length limitation that cooperates with the spindle. In this case, the actuating element may be connected to the spindle. The actuating element is preferably designed as a knurled wheel, which is rigidly connected to one end of the spindle. Here, the position of an axis of rotation of the knurled wheel may be identical to the position of an axis of rotation of the spindle. A circumferential surface of the knurled wheel may be freely accessible at least partially in the area of the finger gripping side, the hand surface gripping side and/or a lateral surface of the rigid gripping part for actuating the actuating element.

The grip length limitation preferably has a spindle nut that cooperates with the spindle. When the actuating element is actuated, the spindle is displaced in one rotation. Consequently, the spindle nut, which is arranged non-rotatably in the gripping part or grip strap, is moved in the longitudinal direction of the spindle, thereby adjusting the grip length limitation.

A leash device for rolling up and unrolling a leash, in particular for leading an animal, and having a grip according to the present invention, is especially advantageous. The grip is preferably integrated in a housing of the leash device. Thus, the grip serves to carry the leash device. A roll of cable with a leash that can be rolled up and unrolled may be built into the housing of the leash device. The leash may be designed as a cable and/or as a belt. The leash can be guided from the housing outwards by means of a housing opening. A braking device, especially a brake button, is preferably provided. The unrolling and/or rolling up movement of the leash roller can be stopped by means of the braking device. Consequently, a shorter leash partial length that

differs from the maximum leash length can be set. A restoring mechanism, especially a restoring spring, may also be provided to roll up the leash onto the leash roller automatically.

In the following, the invention is described in more detail with the aid of the Figures. The drawings show:

Figs 1a to 1d: cut-away lateral views of a first grip according to the invention showing different grip size positions of a grip length limitation,

Fig. 1e: a cut-away lateral view of the first grip according to the invention with additional other locking elements,

Figs 2a and 2b: cut-away lateral views of a second grip according to the invention with different grip size positions of a grip length limitation,

Figs 3a and 3b: cut-away lateral views of a third grip according to the invention with different grip size positions of a grip length limitation,

Figs 4a and 4b: cut-away lateral views of a fourth grip according to the invention with different grip size positions of a grip length limitation,

Figs 5a and 5b: cut-away lateral views of a fifth grip according to the invention with different grip size positions of a grip length limitation,

Figs 6a and 6b: cut-away lateral views of a sixth grip according to the invention with different grip size positions of a grip length limitation,

Figs 7a and 7b: cut-away lateral views of a seventh grip according to the invention with different grip size positions of a grip length limitation,

Fig. 7c: a perspective lateral view of the grip length limitation of Figs 7a and 7b,

Figs 8a and 8b: cut-away lateral views of an eighth grip according to the invention with different grip size positions of a grip length limitation, and

Figs 9a and 9b: cut-away lateral views of another grip according to the invention with different grip size positions of a grip length limitation.

Figs 1a to 1e show cut-away lateral views of a first grip 10 according to the invention with different grip size positions of a grip length limitation 11. The grip 10 is an integral component of a housing, not shown here in detail, of a leash device. The grip 10 possesses a rigid gripping part 12 that is provided for grasping with a single hand, not shown here in detail.

The rigid gripping part 12 has a hand surface gripping side 13 and a finger gripping side 14 that is arranged facing away from the hand surface gripping side 13. When using the grip 10, the gripping part 12 is grasped, such that a hand inner surface of the hand is at least partially in contact with the hand surface gripping side 13. Furthermore, finger inner surfaces are at least partially in contact with the finger gripping side 14 when using the grip 10. The gripping part 12 is ergonomically shaped for grasping with a single hand.

Furthermore, a grip strap 15 is provided. The grip strap 15 is integrally designed with the gripping part 12 and faces the finger gripping side 14. During use, the outsides of fingers face the grip strap 15. The grip strap 15 and gripping part 12 form a grip opening 19 for the at least partial insertion and/or passing through of fingers for grasping the grip 10.

The grip 10 has an adjusting mechanism 16 for adjusting the grip length limitation 11. The grip length limitation 11 has an essentially U-shaped design. Furthermore, the grip length limitation 11 is designed to be rigid in the exemplary embodiment shown here. In addition, the grip length limitation 11 is arranged such that a little finger and/or hand edge can at least partially encompass the gripping part 12. By means of the adjusting mechanism 16, the grip length limitation 11 can be adjusted for adjusting a grip length for different hand widths.

In the exemplary embodiment shown here, the adjusting mechanism 16 is integrated into the gripping part 12 and at the same time is designed as a displacing mechanism and as a pivoting mechanism. First locking elements 17 are provided for displacing the grip length limitation 11 in the longitudinal direction of the gripping part 12. In the exemplary embodiment shown here, three first locking elements 17 are provided, which make possible three

different displacing positions. The first locking elements 17 are an integral component of the gripping part 12.

The grip length limitation 11 has a second locking element 18, which cooperates with each one of the first locking elements 17. The second locking element 18 can be displaced or locked together with the grip length limitation 11 in each one of the three first locking elements 17.

In the exemplary embodiment shown here, the second locking element 18 has a pivot axis 20. The grip length limitation 11 can be locked in two different pivot positions by means of the pivot axis 20 in the example shown here. Alternatively, more than two pivot positions are also conceivable, especially between two and ten pivot positions. To pivot the grip length limitation 11, it can be pivoted about the pivot axis 20, in the exemplary embodiment shown here, by approximately 45° between the two pivot positions. The pivot axis 20 is aligned transversely, here especially at right angles, to a plane that is defined by the longitudinal alignment of the gripping part 12 and of the grip length limitation 11.

Because of the three displacing positions and the two pivot positions a total of six grip size positions are possible in each of the embodiments according to Figs 1a to 1d.

Fig. 1a shows a maximum grip size position, in which the grip length limitation 11 is partially integrated in a U-shaped transition area 48 from the gripping part 12 to the grip strap 15. During use this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or gripping part 12.

The grip size position of Fig. 1b differs from that of Fig. 1a in that the grip length limitation 11 is pivoted about the pivot axis 20 by approximately 45° so as to reduce the grip length for a smaller hand width in the direction of the finger gripping side 14.

To achieve a minimum grip size position, the grip length limitation 11 can be displaced from the grip size position according to Fig. 1b into a grip size position according to Fig. 1c.

In the grip size position according to Fig. 1d, the grip length limitation 11 is pivoted from the grip size position according to Fig. 1c by approximately 45° about the pivot axis 20 away from the finger gripping side 14.

The grip size position according to Fig. 1e corresponds to the one according to Fig. 1d. Unlike Figs 1a to 1d, however, according to Fig. 1e, other first locking elements 117 are provided, which are associated with the grip strap 15. The grip length limitation 11 according to Fig. 1e also has another second locking element 118. This other second locking element 118 is associated with a free end of the grip length limitation 11 and cooperates with each one of the other first locking elements 117. This enables a particularly stable positioning of the grip length limitation 11. An adjusting mechanism 116 is also provided here, which is designed as a purely displacing mechanism in the exemplary embodiment shown here. In the embodiment according to Fig. 1e, a total of three grip size positions can thus be obtained. Alternatively, the adjusting mechanism 116 can be designed according to the adjusting mechanism 16 both as a displacing and a pivoting mechanism. Consequently, a total of six grip size positions may be obtained.

Figs 2a and 2b show cut-away lateral views of a second grip 10 according to the invention with different grip size positions of a grip length limitation 11. Features that are identical to those mentioned previously bear the same reference numerals. Reference is also made to the preceding description.

For the intermittent adjustment of the grip length limitation 11, which here also has a rigid design, an adjusting mechanism 21 is provided, which is designed as a displacing mechanism for displacing the grip length limitation 11 in the longitudinal direction of the gripping part 12 in the exemplary embodiment shown here.

The adjusting mechanism 21 is integrated into the gripping part 12 and possesses a spindle 22. The spindle 22 is aligned, with respect to its longitudinal axis, in the direction of, especially approximately parallel to, the longitudinal axis of the gripping part 12. The spindle 22 is rigidly connected to an actuating element 23, which is designed here as a rotating wheel or knurled wheel. An axis of rotation of the actuating element 23 is aligned parallel to the longitudinal axis of the spindle 22. The actuating element 23 is arranged here at the spindle 22 at one end facing away from the grip length limitation 11. In this case, the actuating element 23 is integrated into the gripping part 12, such that an actuation surface of the operating element 23, here a circumferential surface of the knurled wheel, is freely accessible at least partially in the area of the finger gripping side 14 in the exemplary embodiment shown here. In the example shown here, the actuation surface runs flush with the finger gripping side 14. Thus, the operating element 23 can be comfortably actuated during use by means of a finger, and especially an index finger or middle finger. Alternatively or in addition, the actuation surface may also be at least partially freely accessible at a lateral surface and/or the hand surface gripping side 13 of the gripping part 12, for example, for actuating with a thumb.

A spindle nut 24, which is non-rotatably guided in the gripping part 12, is associated with the grip length limitation 11. By actuating the operating element 23 and a rotation of the spindle 22, the spindle nut 24 and the grip length limitation 11 connected therewith can be displaced in the longitudinal direction of the spindle 22 or of the gripping part 12.

Here, the displacement in the direction of the operating element 23 is limited by means of a stop 49. The stop 49 has a flat surface, with which a flat surface of the spindle nut 24 can come into contact. Because of the flat surfaces of the stop 49 and of the spindle nut 24, an undesired material wear is avoided.

Different grip size positions can be realised for adjusting the grip size for different hand widths.

Thus, Fig. 2a shows a maximum grip size position, in which the grip size limitation 11 is at least partially integrated in a transition area 48 from the

gripping part 12 to the grip strap 15. During use this transition area 48 is associated with a hand edge and/or little finger of the hand holding the grip 10 or gripping part 12. In this position, the spindle nut 24 comes into contact with an inside of the transition area 48 in the area of an end of the spindle 22 facing away from the actuating element 23.

Fig. 2b shows a minimum grip size position, in which the spindle nut 24 comes into contact with the stop 49 in the area of an end of the spindle 22 facing the actuating element 23.

Fig. 3a and 3b show cut-away lateral views of a third grip 10 according to the invention with different grip size positions of a grip length limitation 11. Features that are identical to those mentioned previously bear the same reference numerals. Reference is also made to the preceding description.

In the exemplary embodiment shown here the grip length limitation 11 is designed to be flexible. A first end of the grip length limitation 11 is associated with the gripping part 12. Herein, the grip length limitation 11 can be pivoted about a pivot axis 20 associated with the gripping part 12. The grip length limitation 11 has an eyelet 27 for fastening the grip length limitation 11 to the pivot axis 20.

A second end facing away from the first end of the grip length limitation 11 is associated with the grip strap 15 and is inserted into same. An adjusting mechanism 25 is arranged within the grip strap 15. The adjusting mechanism 25 has an actuating element 23, which is designed as a push-button here. The actuating element 23 emerges from the grip strap 15 in the direction of the finger gripping side 14.

The second end of the grip length limitation 11 is connected to the actuating element 23. Also, the actuating element 23 can be pushed in against the force of a resetting element, which is not shown in detail here, in the direction of the grip strap 15. The actuating element 23, in a state in which it is not pressed

down, meshes with a row of teeth 26 rigidly connected to the grip strap 15. As a result, a locked connection is achieved. In case of an actuation of the operating element 23, and namely a pressing down of actuating element 23 in the direction of the grip strap 15, the connection between the actuating element 23 and the row of teeth 26 is broken. Then, the actuating element 23 together with the second end of the grip length limitation 11 can be continuously displaced essentially parallel to or in the direction of the longitudinal alignment of the grip strap 15 or of the gripping part 12. As soon as the actuating element 23 is released, actuating element 23 automatically moves in the direction of the gripping part 12. Consequently, the actuating element meshes with the row of teeth 26, as a result of which a locked connection is achieved.

The adjusting mechanism 25 is designed here as a displacing and adjusting mechanism. In this case, the grip length limitation 11 is displaced by means of the actuating element 23. A pivoting of the grip length limitation about the pivot axis 20 takes place here simultaneously with the displacement.

By means of the adjusting mechanism 25 and grip length limitation 11, which has a flexible design, the length of the grip length limitation 11 can thus be changed in the area of the grip opening 19. Thus, different grip size positions can be continuously adjusted by means of the various adjustable lengths of the grip length limitation 11.

Thus, Fig. 3a shows a maximum grip size position, in which the grip length limitation 11 is integrated into the gripping part 12 and the grip strap 15. The operating element 23 is located at a lower end of the row of teeth 26.

In Fig. 3b, the grip length limitation 11 is in a minimum grip size position. The operating element 23 in this case is located at an upper end of the row of teeth 26.

Figs 4a and 4b show cut-away lateral views of a fourth grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same

reference numerals. Reference is therefore also made to the preceding description.

In the exemplary embodiment shown here, grip length limitation 11 has a rigid design. An adjusting mechanism 28 is integrated into the gripping part 12. Here, a first end of the grip length limitation 11 is inserted into the gripping part 12.

An actuating element 23 is also arranged in the gripping part 12, whereby the actuating element 23 is designed as a rotatable turntable in the exemplary embodiment shown here. An actuation surface is freely accessible here as a circumferential surface of the actuating element 23 at least partially in the area of the hand surface gripping side 13 for actuating the actuating element 23. The first end of grip length limitation 11 is outside the centre of the operating element 23 or eccentric and is rotatably connected to the actuating element 23 about an axis of rotation 29.

A second end facing away from the first end of the grip length limitation 11 is associated with the grip strap 15. Here, the second end or the grip length limitation 11 can be pivoted about a pivot axis 20 associated with the grip strap 15.

Thus, the adjusting mechanism 28 makes possible continuously adjustable grip size positions. The adjusting mechanism 28 is designed as a pivoting mechanism here.

Fig. 4a shows a maximum grip size position, in which the axis of rotation 29 faces the transition area 48 from the gripping part 12 to the grip strap 15. During use this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12. Here, the grip length limitation 11 is joined to this transition area 48 in a positive locking manner.

In comparison, Fig. 4b shows a minimum grip size position, in which the axis of rotation 29 is facing away from the transition area 48 from the gripping part 12

to the grip strap 15. Here, the grip length limitation 11 is pivoted about the pivot axis 20 away from the transition area 48 compared to Fig. 4a.

Figs 5a and 5b show cut-away lateral views of a fifth grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

An adjusting mechanism 30 is arranged in the gripping part 12. The adjusting mechanism 30 has a spindle 22, which is rotatably mounted within the gripping part 12 and is aligned, with respect to the longitudinal axis of spindle 22, in the direction of or approximately parallel to the longitudinal alignment of the gripping part 12. The spindle 22 is rigidly connected to an actuating element 23, which here is designed as a rotating wheel or a knurled wheel - comparable to the embodiment according to Figs 2a and 2b. An axis of rotation of actuating element 23 is aligned parallel to the longitudinal axis of the spindle 22. The actuating element 23 is arranged at the spindle 22 at an end facing away from the grip length limitation 11. Here, the actuating element 23 is integrated into the gripping part 12, such that in the exemplary embodiment shown here, an actuation surface of operating element 23, here a circumferential surface of the knurled wheel, is at least partially freely accessible in the area of the hand surface gripping side 13. During use the operating element 23 can be comfortably actuated by means of a thumb. As an alternative or in addition, the actuation surface may also be at least partially freely accessible at a lateral surface and/or the finger gripping side 14 of the gripping part 12, for example, for actuating with a finger.

In the exemplary embodiment shown here, the grip length limitation 11 again has a rigid design. A first end of the grip length limitation 11 is inserted into the gripping part 12 and has a toothed comb 31. The toothed comb 31 meshes at least partially with the spindle 22. A second end facing away from the first end of the grip length limitation 11 is associated with the grip strap 15 - comparable to the embodiment according to Figs 4a and 4b. Here, the second end or grip

length limitation 11 can be pivoted about a pivot axis 20 associated with the grip strap 15.

When the adjusting mechanism 30, which is designed here as a pivoting mechanism, is actuated, the spindle 22 is at the same time rotated via a rotation of the actuation element 23. Consequently, the grip length limitation 11 can be pivoted about the pivot axis 20 because of the interaction of the toothed comb 31 with the spindle 22. Thus, various grip size positions can be continuously adjusted.

According to Fig. 5a, a maximum grip size position is shown, in which the grip length limitation 11 is in contact with the transition area 48 from the gripping part 12 to the grip strap 15. During use, this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12. According to Fig. 5b, a minimum grip size position is shown, in which the grip length limitation 11 is pivoted about the pivot axis 20 away from the transition area 48 - in comparison to Fig. 5a.

Figs 6a and 6b show cut-away lateral views of a sixth grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

Grip length limitation 11 is designed here corresponding to the embodiment according to Figs 5a and 5b and accordingly has a first end with a toothed comb 31 and a second end with a pivot axis 20.

The actuating element 23 here is likewise designed as a rotating wheel or as a knurled wheel. The actuating element 23 is integrated in the gripping part 12, such that in the exemplary embodiment shown here, an actuation surface of the operating element 23, here a circumferential surface of the knurled wheel, is at least partially freely accessible in the area of the hand surface gripping side 13. However, the axis of the actuating element 23 in the exemplary embodiment shown here is arranged parallel to the pivot axis 20. The toothed

comb 31 meshes with a gear element, which is not shown in detail here, of the actuating element 23 and interacts with same. Consequently, the grip length limitation 11 can be actuated directly by the actuating element 23. A spindle is dispensable.

When the adjusting mechanism 32, which is likewise designed as a pivoting mechanism here, is actuated, the grip length limitation 11 can be pivoted about the pivot axis 20 via a rotation of the actuating element 23 and because of the cooperation of the toothed comb 31 with the actuating element 23. Thus, various grip size positions can be continuously adjusted.

According to Fig. 6a, a maximum grip size position is shown, in which the grip length limitation 11 is in contact with the transition area 48 from the gripping part 12 to the grip strap 15. During use, this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12.

According to Fig. 6b, a minimum grip size position is shown, in which the grip length limitation 11 is pivoted about the pivot axis 20 away from the transition area 48 in comparison to Fig. 6a.

Figs 7a and 7b show cut-away lateral views of a seventh grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

An adjusting mechanism 33, designed as a pivoting mechanism, is associated with the gripping part 12 in the exemplary embodiment shown here. The adjusting mechanism 33 has a locking strip 34, which is inserted in the gripping part 12. The locking strip 34 interacts with locking parts 35, 36, which are associated with an end of the grip length limitation 11 facing the gripping part 12.

A second end facing away from the first end of the grip length limitation 11 has a pivot axis 20 that is associated with the grip strap 15.

Fig. 7a shows a maximum grip size position, in which the grip length limitation 11 is in contact with the transition area 48 from the gripping part 12 to the grip strap 15. During use, this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12.

According to Fig. 7b, a minimum grip size position is shown, in which the grip length limitation 11 is pivoted about the pivot axis 20 away from the transition area 48 in comparison to Fig. 7a.

The mode of operation of the adjusting mechanism 33 arises from a combination of Figs 7a and 7b with the following explanations regarding Fig. 7c.

Fig. 7c shows a perspective lateral view of grip length limitation 11 in the embodiment according to Figs 7a and 7b. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

In the exemplary embodiment shown here, the grip length limitation 11 has a basic body 37, which has a U-shaped design. As legs of the U-shaped basic body 37, this has two wings 38, 39. A locking part 35 or 36 is arranged at each free end of the wings 38, 39. The wings 38, 39 and thus the locking parts 35, 36 can be moved elastically toward one another according to arrows 40, 41.

For adjusting the grip size for adapting to a hand width, first the wings 38, 39 are moved towards one another in the direction of arrows 40, 41 by means of fingers and thumb of one hand. At the same time, the locking parts 35, 36 are consequently also moved towards one another, as a result of which these no longer mesh with the locking strip 34. Then, the grip length limitation 11 can be pivoted about pivot axis 20, for example, according to arrow 42 or in a direction opposite arrow 42. If the desired locking position is reached, the wings 38, 39 are released. Consequently, the wings 38, 39 return to their original position

according to Fig. 7c. At the same time, the locking parts 35, 36 are moved away from one another and mesh with the locking strip 34. Regardless of the shape of the locking strip 34, intermittent or concrete, pre-set grip size positions are feasible with the adjusting mechanism 33.

Figs 8a and 8b show cut-away lateral views of an eighth grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

An adjusting mechanism 43, which is designed as a pivoting mechanism, is also associated with the gripping part 12 in the exemplary embodiment shown here. In this case, an actuating element 23 is provided that is designed in this case as a rotating wheel or knurled wheel. An axis of rotation of the actuating element 23 is aligned at right angles to a plane, which is defined by the gripping part 12 and the grip strap 15. The actuating element 23 is positioned in the gripping part 12, such that a circumferential surface of the actuating element 23 is freely accessible as an operating surface at least partially in the area of the hand surface gripping side 13. As a result, an actuation of the actuating element 23 is made possible, for example, with a thumb. A gear 44 is connected to the actuating element 23 concentrically to the actuating element 23. The position of the axis of rotation of the actuating element 23 here is identical to the position of the axis of rotation of the gear 44. In the exemplary embodiment shown here, the gear 44 has a smaller radius than the actuating element 23.

A first end of the grip length limitation 11 is inserted into the gripping part 12 and has a toothed track 45. The toothed track 45 meshes with the gear 44 and thus interacts with same. A second end of the grip length limitation 11 facing away from the first end has a pivot axis 20 that is associated with the grip strap 15.

When the actuating element 23 is actuated, the gear 44 connected to same rotates at the same time. The toothed track 45 can be displaced or moved in the longitudinal direction of the gripping part 12 by means of the gear 44.

Thus, when the adjusting mechanism 43 is actuated, the grip length limitation 11 can be pivoted about the pivot axis 20 via a rotation of the actuating element 23 and because of the cooperation of the gear 44 with toothed track 45. Thus, various grip size positions can be continuously adjusted.

According to Fig. 8a, a minimum grip size position is shown, in which the grip length limitation 11 is pivoted about the pivot axis 20 away from the transition area 48 of the gripping part 12 to the grip strap 15. During use, this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12.

According to Fig. 8b, a maximum grip size position is shown, in which the grip length limitation 11 is in contact with the transition area 48 from the gripping part 12 to the grip strap 15.

Figs 9a and 9b show cut-away lateral views of another grip 10 according to the present invention with different grip size positions of a grip length limitation 11. Features that are identical to the ones mentioned previously bear the same reference numerals. Reference is therefore also made to the preceding description.

An adjusting mechanism 46 is associated with grip strap 15 in the exemplary embodiment shown here. An actuating element 23, which here has a spherical design, is provided on a side of the grip strap 15 facing away from the finger gripping side 14.

The actuating element 23 is rigidly connected to a first end of a spindle 22. Spindle 22 is rotatably mounted in the grip strap 15.

The grip length limitation 11 is associated with the gripping part 12 with a first end, whereby the first end is rigidly connected to the gripping part 12 by means of a fastening 47 in the area of the finger gripping side 14. A second end of the

grip length limitation 11 facing away from the first end is inserted into the grip strap 15 and has a toothed track 45. The toothed track 45 which has a flexible design in this exemplary embodiment meshes with the spindle 22 in the area of the spindle 22 and cooperates with same.

When the actuating element 23 is actuated, the spindle 22 connected to same rotates at the same time. The toothed track 45 can be displaced or moved within the grip strap 15 by means of the spindle 22. Thus, when the adjusting mechanism 46 is actuated, the grip length limitation 11 can be pivoted about a pivot axis 20 via a rotation of the actuating element 23 and because of the cooperation of the spindle 22 with the toothed track 45.

The length of the grip length limitation 11 in the area of grip opening 19 can be changed by means of the adjusting mechanism 46 and the grip length limitation 11, which has a flexible shape. Thus, various grip size positions can be continuously adjusted by means of the various adjustable lengths of the grip length limitation 11. In the exemplary embodiment shown here, the pivot axis 20 has a virtual rather than material design and lies in the area of a fastening 47 for the grip length limitation 11 in the area of the grip strap 15.

The adjusting mechanism 46 is designed as a displacing and adjusting mechanism in the exemplary embodiment shown here. Here, a displacement takes place by means of the actuating element 23 in cooperation with the spindle 22 and the toothed track 45. At the same time, a pivoting takes place about the pivot axis 20.

Fig. 9a shows a maximum grip size position, in which the grip length limitation 11, which has a flexible design in this embodiment, is in contact with the transition area 48 from the gripping part 12 to the grip strap 15. During use, this transition area 48 is associated with a hand edge and/or a little finger of the hand holding the grip 10 or the gripping part 12.

According to Fig. 9b, a minimum grip size position is shown, in which the grip length limitation 11 is pivoted about a pivot axis 20 away from the transition

area 48 in comparison to Fig. 9a. The pivot axis 20 is associated with the gripping part 12 here.

All grips 10, as described above concerning Figs 1a to 9b, may be designed as an integral component with a housing.

For example, the grip 10 may be integrated in a housing of a leash device. The leash device may be provided for rolling up and unrolling a leash. Here, the leash or leash device is used for leading an animal, for example, a dog or a cat. To this end, the leash may be guided within the housing on a leash roller and can be led out of the housing by means of a leash opening. A brake button may be provided for stopping the unrolling process and thus for limiting the unrolled leash length.

List of Reference Numerals

10 Grip
11 Grip length limitation
12 Gripping part
13 Hand surface gripping side
14 Finger gripping side
15 Grip strap
16 Adjusting mechanism
116 Adjusting mechanism
17 First locking element
117 Another first locking element
18 Second locking element
118 Another second locking element
19 Grip opening
20 Pivot axis
21 Adjusting mechanism
22 Spindle
23 Actuating element
24 Spindle nut

25 Adjusting mechanism
26 Row of teeth
27 Eyelet
28 Adjusting mechanism
29 Axis of rotation
30 Adjusting mechanism
31 Toothed comb
32 Adjusting mechanism
33 Adjusting mechanism
34 Locking strip
35 Locking part
36 Locking part
37 Basic body
38 Wing
39 Wing
40 Arrow
41 Arrow
42 Arrow
43 Adjusting mechanism
44 Gear
45 Toothed track
46 Adjusting mechanism
47 Fastening means
48 Transition area
49 Stop

## Patentkrav

**1.** Greb til at gribe med en hånd, især til at holde en snorindretning til oprulning og udrulning af en snor til føring af et dyr, med en stiv gribedel (12), **kendetegnet ved, at** der er tilvejebragt en indstillelig grebslængdebegrænsning (11) til indstilling af en grebslængde til forskellige håndbredder, og at der er tilvejebragt en grebsbøjle (15), der er forbundet med gribedelen (12) og er udformet i ét stykke med gribedelen (12), hvor grebsbøjlen (15) og gribedelen (12) danner en grebsåbning (19) til i det mindste delvis gennemføring af fingre, og grebslængdebegrænsningen (11) er anbragt inden for grebsåbningen (19).

**2.** Greb ifølge krav 1, **kendetegnet ved, at** den, fortrinsvis U-formede, grebslængdebegrænsning (11) i gribedelens (12) langsgående retning kan indstilles og/eller positioneres ved hjælp af en indstillingsmekanisme (16, 116, 21, 25, 28, 30, 32, 33, 43, 46), især kontinuerligt og/eller diskontinuerligt, hvor gribedelen (12) fortrinsvis har en håndfladegribeside (13) til i det mindste delvis anlæggelse af en indvendig håndflade og en fingergribeside (14) til i det mindste delvis anlæggelse af indvendige fingerflader.

**3.** Greb ifølge krav 1 eller 2, **kendetegnet ved, at** grebslængdebegrænsningen (11) er anbragt på gribedelen (12) til i det mindste delvist at omslutte en lillefinger og/eller en håndkant.

**4.** Greb ifølge et af de foregående krav, **kendetegnet ved, at** grebsbøjlen (15) vender mod en fingergribeside (14) af gribedelen (12).

**5.** Greb ifølge et af de foregående krav, **kendetegnet ved, at** grebslængdebegrænsningen (11) i en maksimal grebstørrelsesstilling i det mindste delvist er integreret i gribedelen (12) og/eller grebsbøjlen (15), hvor grebslængdebegrænsningen (11) fortrinsvis kan indstilles til formindskelse af grebstørrelsesstillingen i gribedelens (12) langsgående retning.

**6.** Greb ifølge et af kravene 2 til 5, **kendetegnet ved, at** indstillingsmekanismen (16, 116, 21, 25, 28, 30, 32, 33, 43, 46) er udformet som en skydemekanisme og/eller som en drejemekanisme, hvor der fortrinsvis ved en dreje-

mekanisme er tilvejebragt drejeakse (20), der især er tilordnet til gribedelen (12) eller grebsbøjlen (15) og/eller kan forskydes med skydemekanismen, til at dreje grebslængdebegrænsningen (11).

**7.** Greb ifølge et af kravene 2 til 6, **kendetegnet ved, at** der er tilvejebragt et betjeningselement (23) til betjening af indstillingsmekanismen (16, 116, 21, 25, 28, 30, 32, 33, 43, 46), hvor betjeningselementet (23) fortrinsvis er tilordnet gribedelen (12), grebsbøjlen (15) eller grebslængdebegrænsningen (11).

**8.** Greb ifølge krav 6 eller 7, **kendetegnet ved, at** skydemekanismen og/eller drejemekanismen omfatter en gearmekanisme, indgrebsmekanisme og/eller en klipmekanisme, hvor der fortrinsvis ved en indgrebsmekanisme er anbragt første indgrebselementer (17, 117) og/eller en indgrebsliste (34) i området ved gribedelen (12) og/eller grebsbøjlen (15), der især arbejder sammen med mindst et andet indgrebselement (18, 118) og/eller indgrebsdele (35, 36) af grebslængdebegrænsningen (11).

**9.** Greb ifølge et af kravene 6 til 8, **kendetegnet ved, at** skydemekanismen omfatter en spindel (22), der er anbragt i gribedelen (12) eller i grebsbøjlen (15), hvor spindelen (22) fortrinsvis kan betjenes ved hjælp af et betjeningselement (23), især et roterende hjul, til indstilling af grebslængdebegrænsningen (11), der arbejder sammen med spindelen (22).

**10.** Snorindretning til oprulning og udrulning af en snor, især til føring af et dyr, med et greb (10) ifølge et af de foregående krav, hvor grebet (10) fortrinsvis er integreret i et hus af snorindretningen.

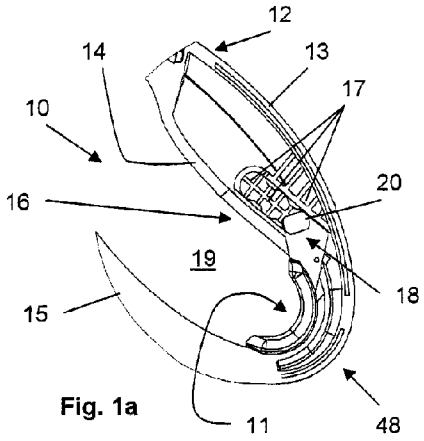


Fig. 1a

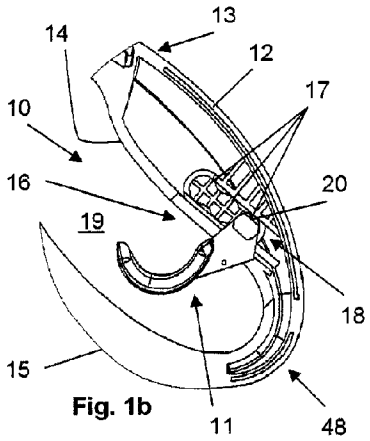


Fig. 1b

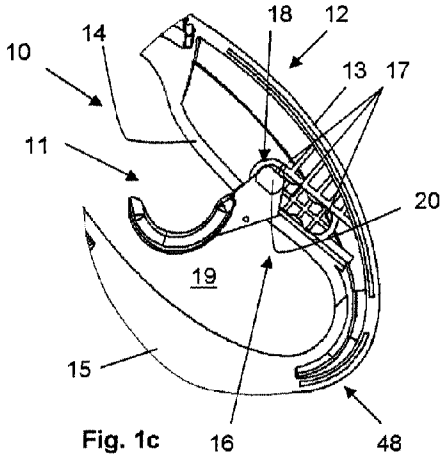


Fig. 1c

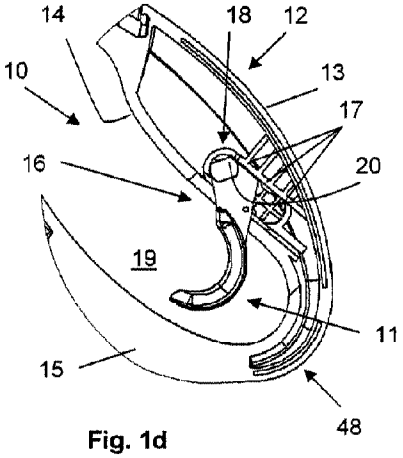


Fig. 1d

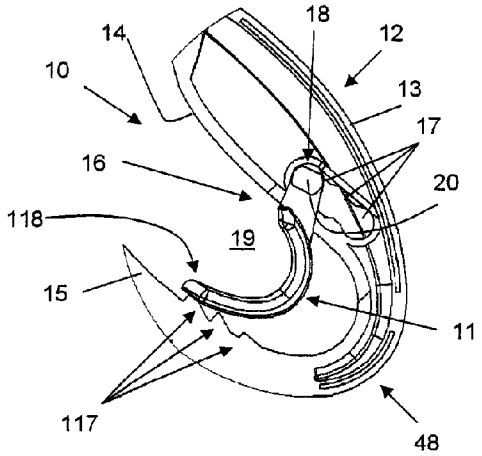


Fig. 1e

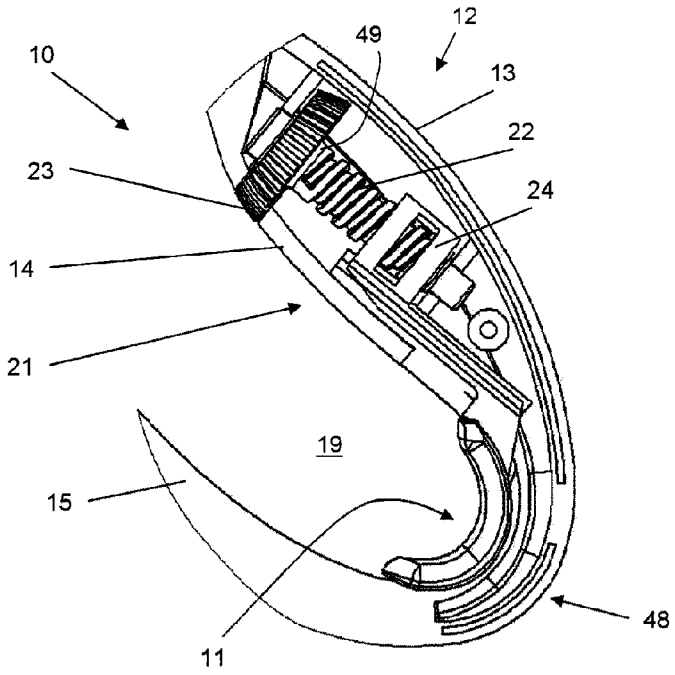
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Fig. 2a

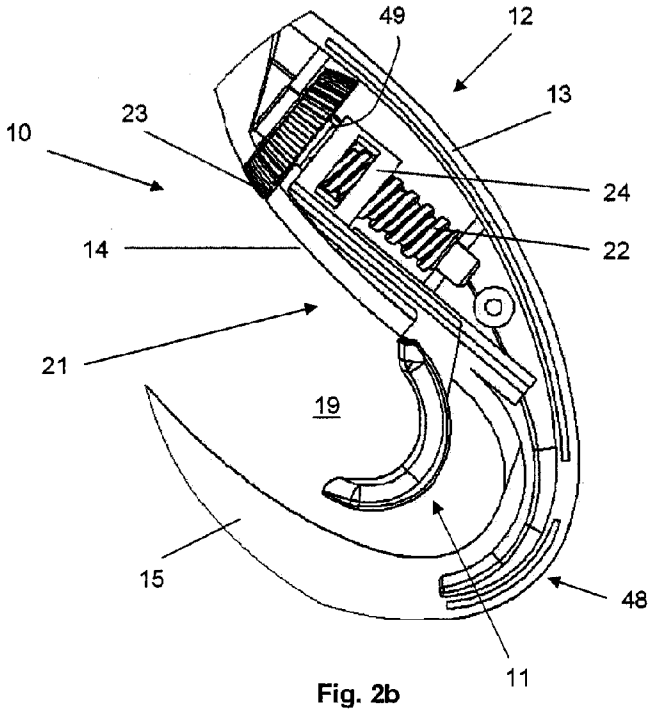
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Fig. 2b

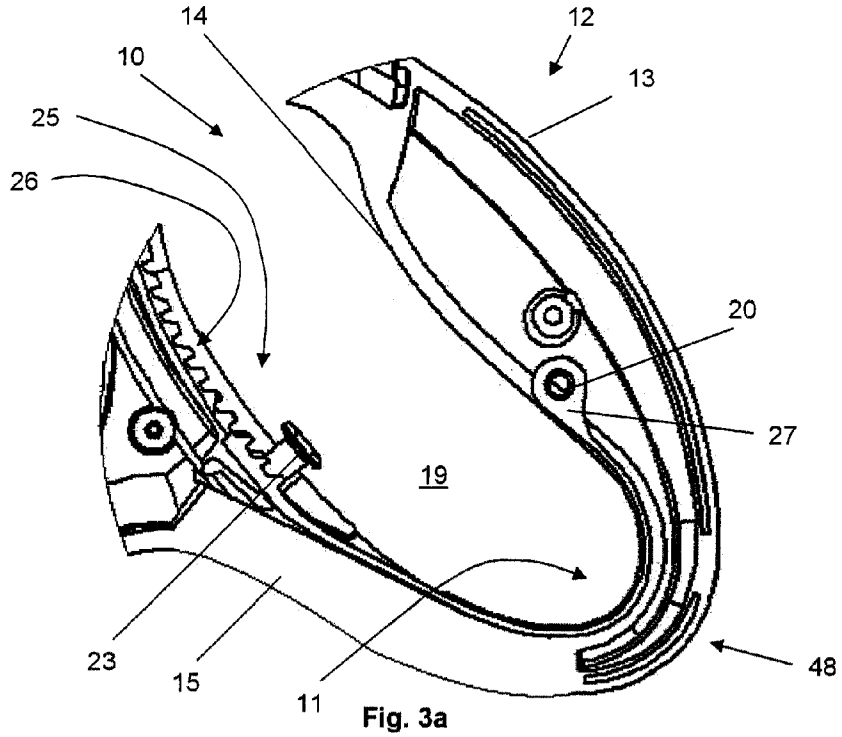
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Fig. 3a

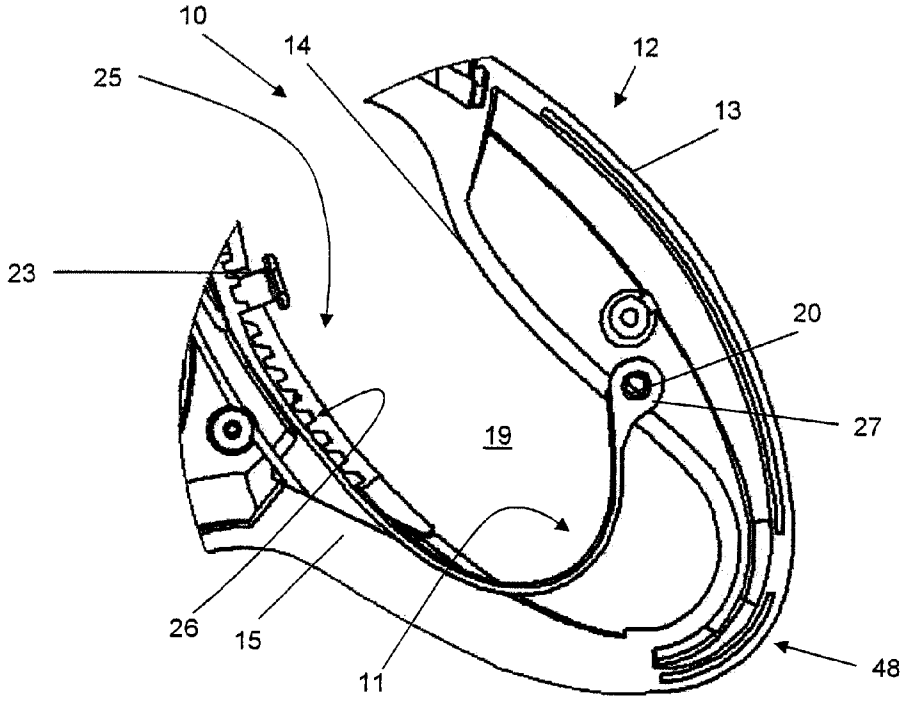
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Fig. 3b

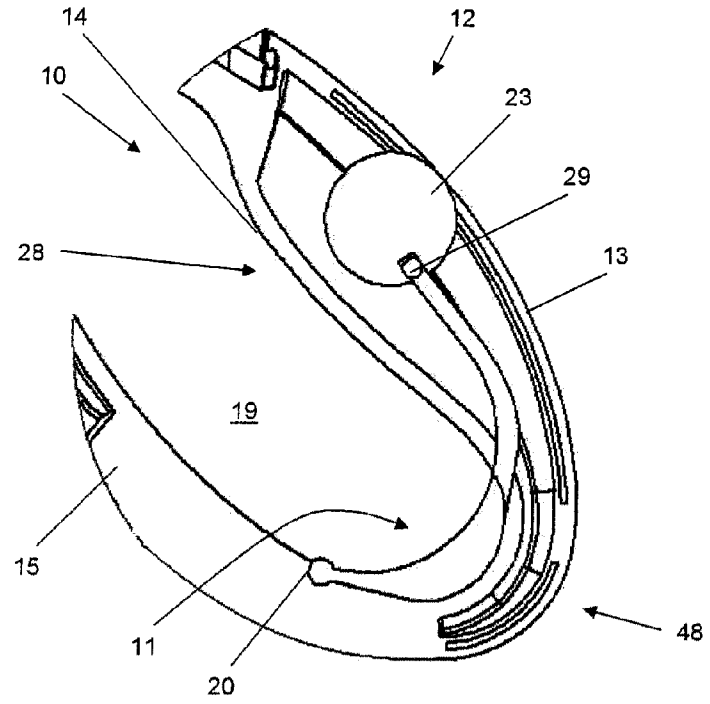


Fig. 4a

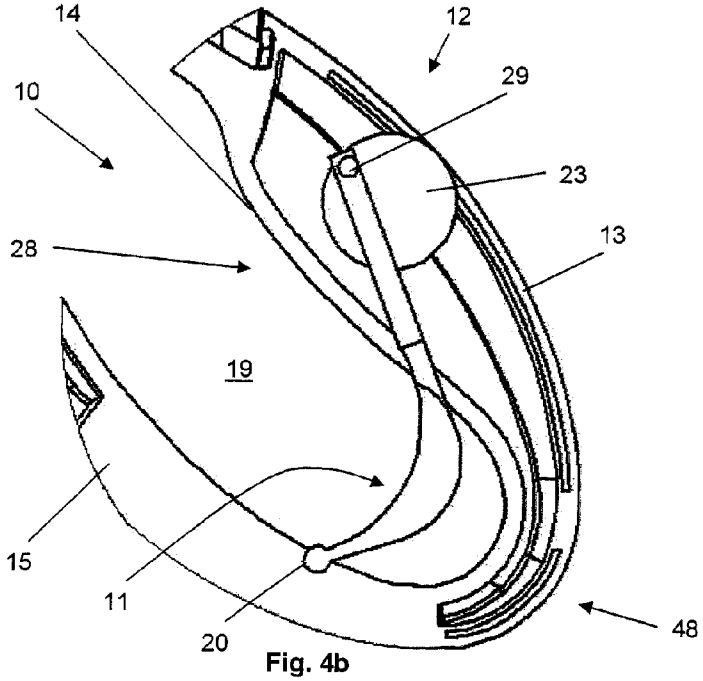


Fig. 4b

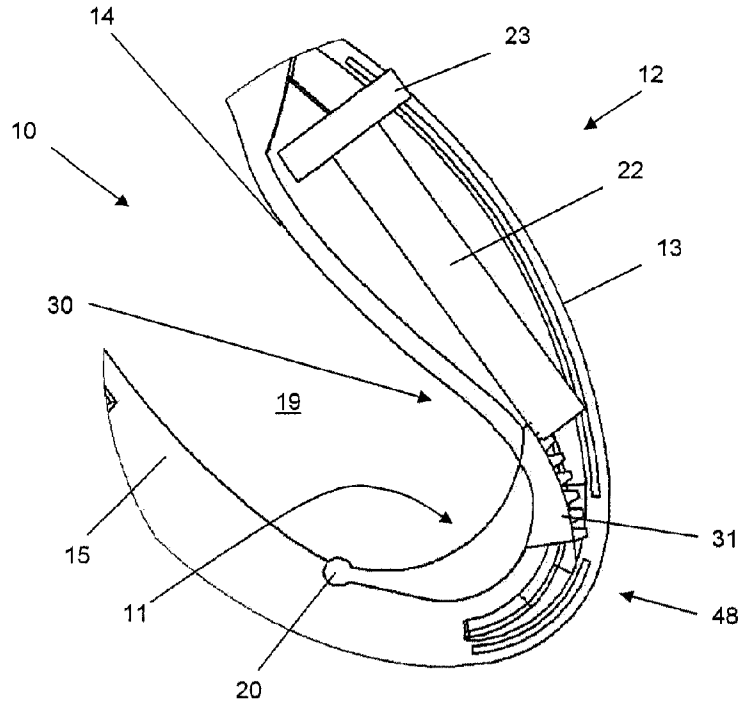
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Fig. 5a

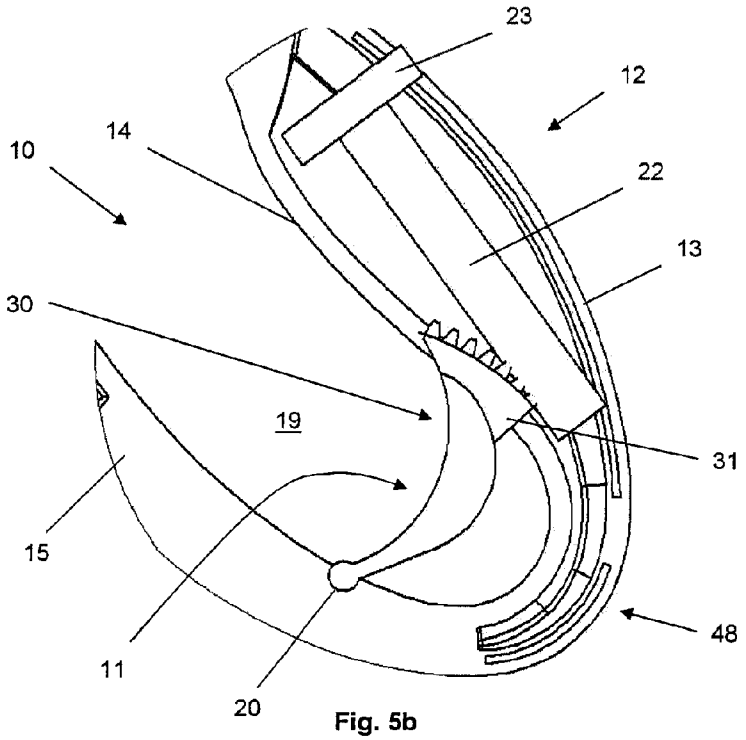
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Fig. 5b

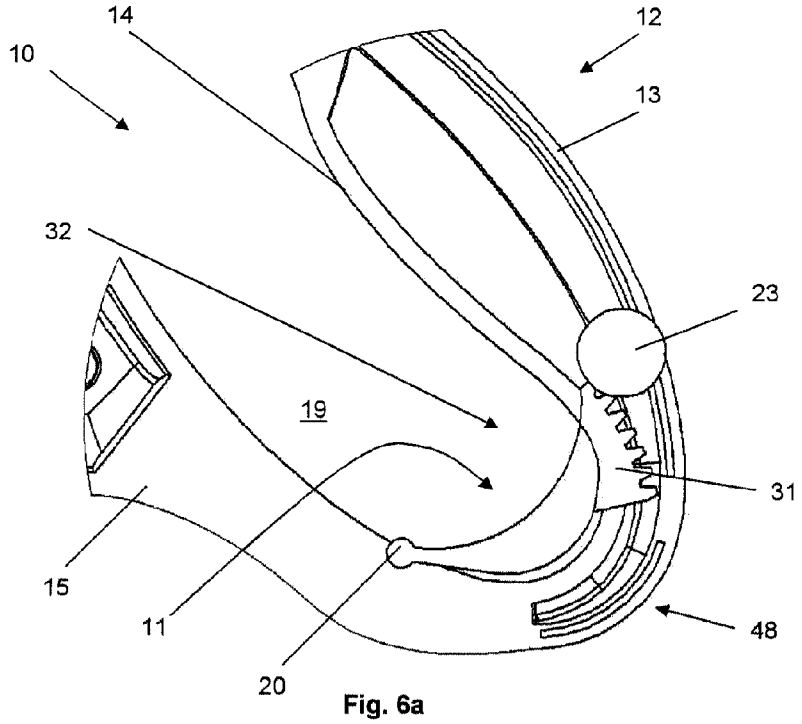


Fig. 6a

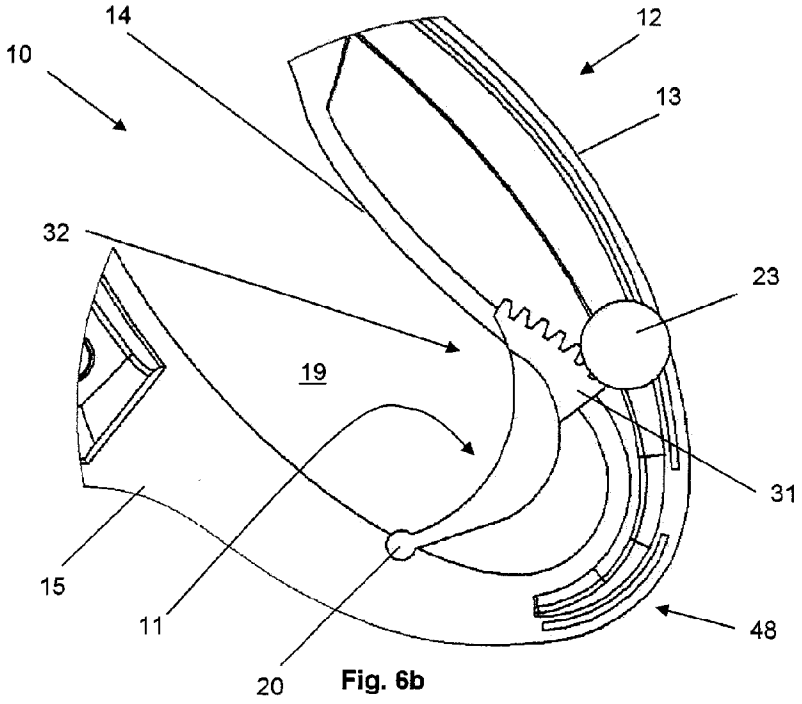


Fig. 6b

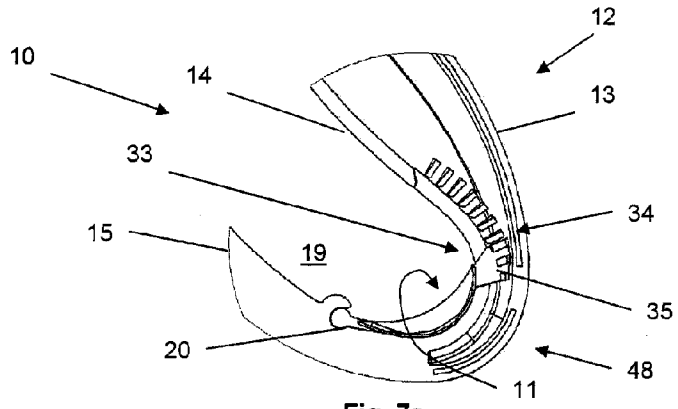


Fig. 7a

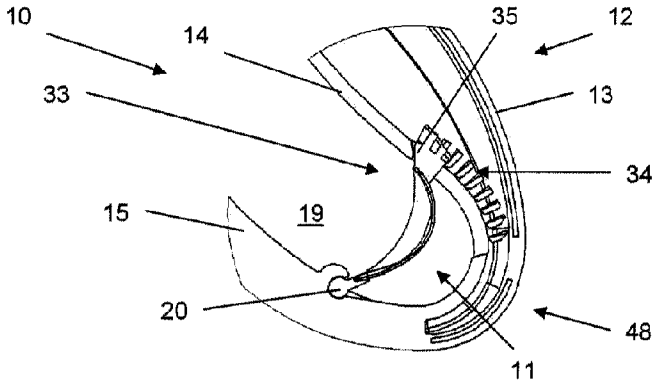


Fig. 7b

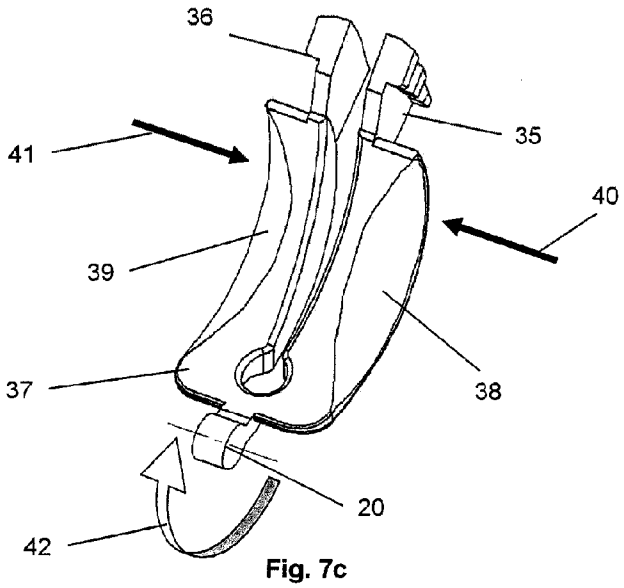


Fig. 7c

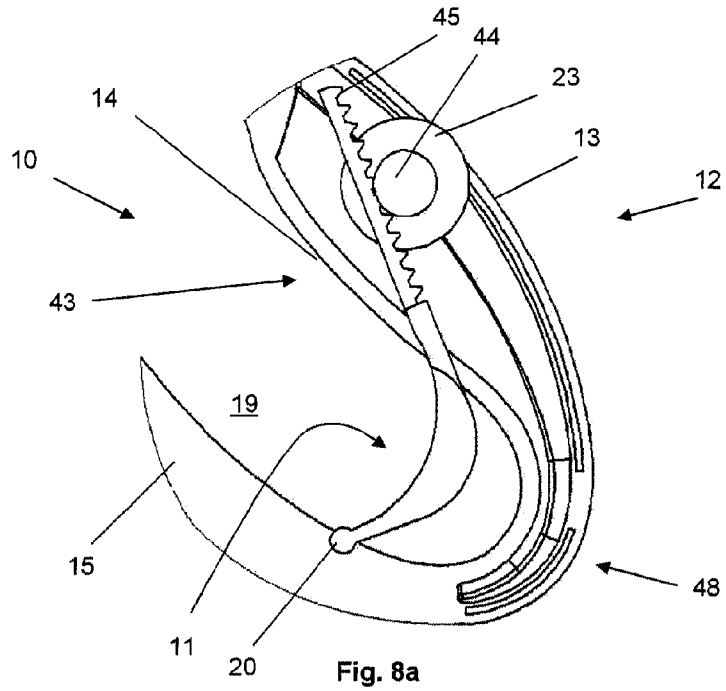
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Fig. 8a

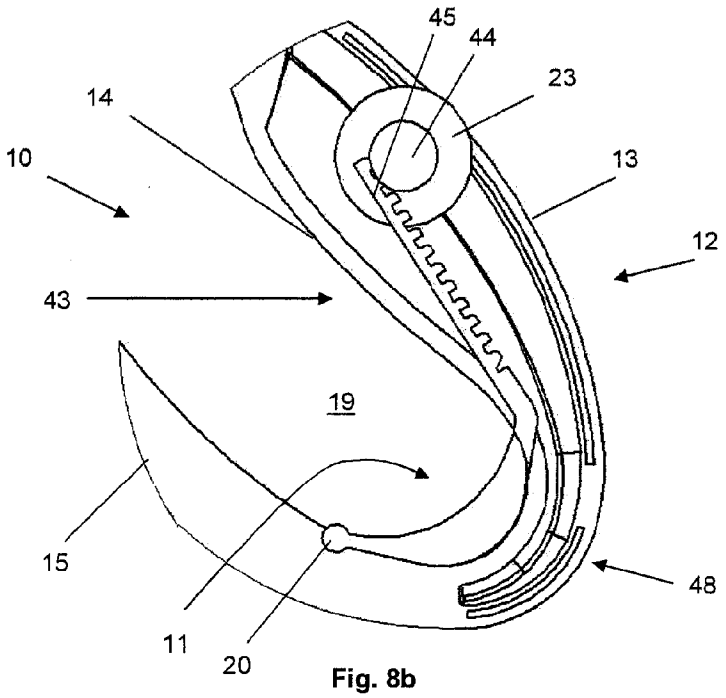
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Fig. 8b

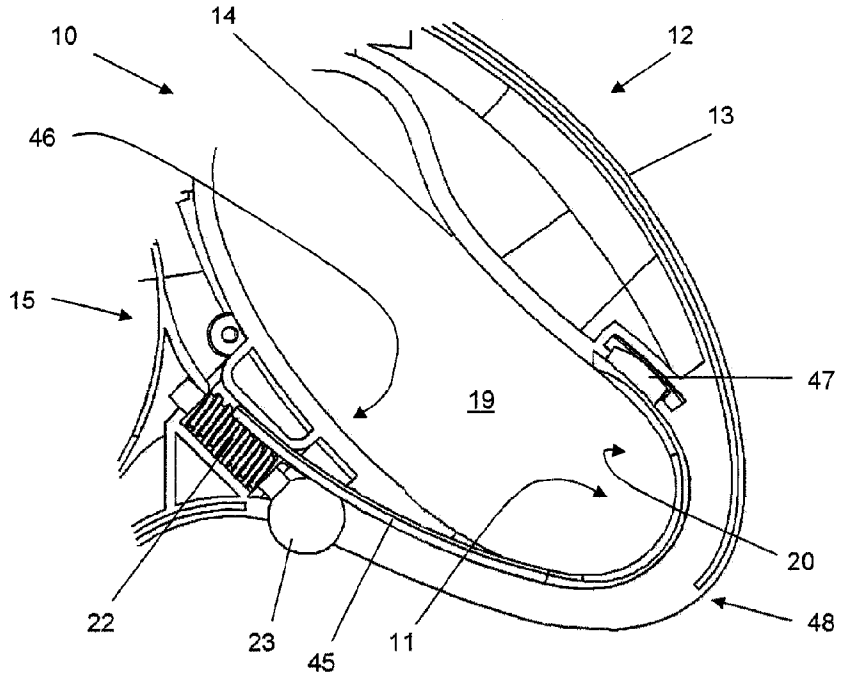
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Fig. 9a

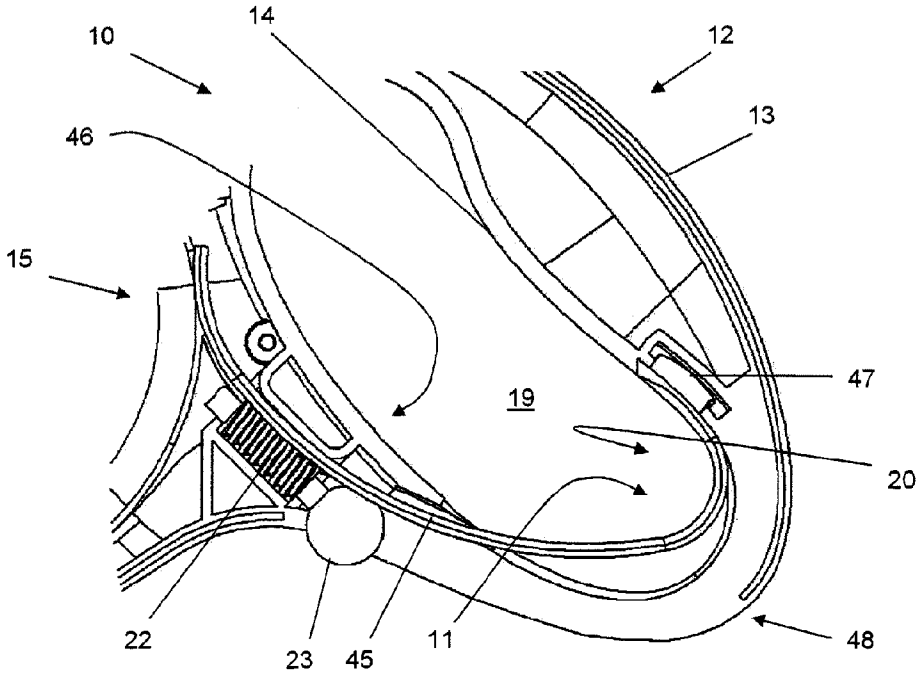
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Fig. 9b