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(54) Title: COMBINED ARTICLE FOR PERSONAL HYGIENE

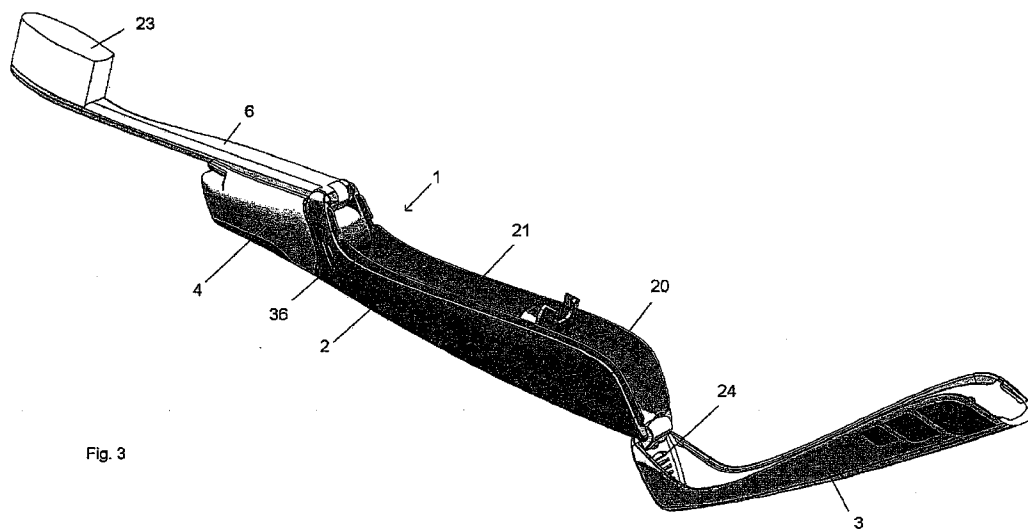


Fig. 3

(57) Abstract: An article for personal hygiene is described, having a partly hollow holder part (2), a toothbrush part (6) and a fastening means (5) for a razor head (7). The toothbrush part (6) is arranged to be folded into the holder part (2), as the toothbrush part (6) has a first end with a hinge mechanism (13, 14), in such a way that the toothbrush part (6) is pivotally fastened to the holder part (2). In the partly hollow holder part (2) it is arranged a wall (22), constituting a physical separation between a first room (20) and a second room (21). The end of the toothbrush part (6) having a toothbrush head (23) is arranged to be folded into the first room (20). The wall (22) constitutes at the same time a fastening for a filling device (25), known per se. More air and drain holes (24, 35, 36, 34a, 34b) are preferably arranged on the article.



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Combined article for personal hygiene

The present invention relates to a combined article for personal hygiene, according to the preamble of patent claim 1.

5

### **Background**

Combined articles for personal hygiene, comprising a toothbrush part and a razor part is previously known in a number variants, a.o. Norwegian Patent Applications 19991855 and 20044396, and from US 5 832 940 and US 6 206 600.

10 Generally, these known devices have a relatively complicated construction, and are correspondingly expensive to manufacture. There is a need to reduce these manufacturing costs substantially. Further, there is a need for a solution involving a minimal number of loose parts, to avoid that some components are getting lost.

From WO 2005/087047 it is known a foldable toothbrush, which in folded position can get tooth  
15 paste applied from a reservoir. This known article lacks fastening possibilities for a razor, and it is not obvious to perform such fastening possibilities.

US 4 760 642 shows a hygiene article which in one end is equipped with a toothbrush, and in the other end is equipped with a razor. The reservoirs of tooth paste and shaving spray are arranged for applying to the toothbrush and the razor, respectively. This known device is not  
20 foldable and considering the design, it is not obvious to make it foldable.

A special problem of combined hygiene articles (several functions in the same product), is to separate the different ranges of use. In known combinations of toothbrush and razor there might be a problem that remnants of water and shaving means get in contact with the toothbrush part. This is avoided with a device according to the present invention.

25

### **The object of the invention**

The object of the invention is fulfilled with a device having features stated in the characterizing part of patent claim 1. Further features are stated in the corresponding dependent claims.

### **30 Examples of embodiment**

The invention will in the following be described in detail by means of an example and with reference to enclosed figures, where,

Figure 1 shows a perspective view of a device according to the present invention, in folded state,

Figure 2 shows the embodiment of Figure 1, having the lid of the toothbrush-part open,

Figure 3 shows the embodiment of Figure 1, having the toothbrush part extended

Figure 4 shows the embodiment of Figure 1, having the toothbrush part extended and the lid closed,

5 Figure 5 shows the embodiment of Figure 1, having the lid of the razor open,

Figure 6 shows the embodiment of Figure 1, having the lid closed and the razor fastened,

Figure 7 shows the embodiment in a cut presentation, and with the lids open,

Figure 8 shows the embodiment in a cut presentation, having the lids detached from the holder part,

10 Figure 9 shows a cut presentation of the second lid, with the razor head, and

Figures 10a and 10b show the embodiment of the filler-device in perspective.

Figure 1 shows an embodiment of a combined hygiene article according to the present invention, generally termed 1. The article 1 comprises a holder part 2, a first lid 3 and a second lid  
15 4. On the second lid 4 there is a fastening means 5 for a razor head.

In Figure 2 the first lid 3 is opened. This has a long shape and preferably a curved cross section having a substantial U-form. At this end, the first lid 3 is pivotally mounted to the holder part 2 in a way described further below.

When the first lid 3 is closed, it is shaped to fit to the holder part 2, in such a way that they form  
20 a substantially continuous surface. The holder part 2 has an inner skirt fitting into an outer skirt of the lid 3.

A toothbrush-part 6 is hidden in the holder part 2, when the first lid 3 is closed (basic position). The toothbrush part 6 is pivotally fastened at its one end to the holder part 2, at a point being closer to the end of the holder part 2 being opposite to the end where the first lid 3 is pivotally  
25 fastened. The toothbrush part 6 can rotate ca 145° around its pivoting point, from totally folded position to totally extended position. In Figure 3 the toothbrush part 6 is shown in totally extended position.

Once the toothbrush part is totally extended, the first lid 3 may be tilted into place, in such a way that the holder part 2 and the first lid 3 form a good grip for the user of the toothbrush. This is  
30 shown in Figure 4.

Figure 5 shows the second lid 4 in an open position. Inside the cavity being in the second lid 4, there is placed a razor head 7 of regular type. It is possible to use razor heads from different manufactures. The fastening means 5 is arranged to fit to a razor head 7 from a give manufacture, but it is within the scope of the invention, that this can be adjusted.

When the razor head 7 is taken out of the second lid 4, the second lid 4 is closed, and the razor head is placed on the fastening means 5. This is shown in Figure 6. The razor is now ready to use and the holder part constitutes a good grip.

Referring to Figure 7, it is arranged a first pin 8 in the holder part 2. On the first lid 3 there is arranged a first socket 9 having a partly open circle as cross section. The inner diameter of the first socket 9 is substantially the same size as the diameter of the pin 8. A slit 10 in the socket 9 has an aperture being somewhat smaller than the diameter of the pin 8.

When installing the lid 3 on the holder part 2, the slit 10 in the socket 9 is pressed against the pin, and will embrace the pin 8 with a click-operation. Correspondingly, the lid 3 may be departed from the holder part 2, both when desirable and unintentionally. In both cases the parts 2, 3 can easily be joined again, and held in place as before. This is shown in Figure 8.

In a preferred embodiment, the lid 3 is arranged to create an angle to the holder part 2, of 130° to 160°, preferably 144°, upon opening. This opening angle is sufficient to extend the toothbrush holder 6 into using position, and at the same time large enough to ensure that the lid is not unintentionally broken off the pin.

The second lid 4 is fastened to the holder part 2 in a corresponding way as the first lid 3. Here, it is arranged a second pin 11 fitting into a second socket 12. The second socket 12 has a slit 13 with an aperture being somewhat smaller than the diameter of the second pin 11.

As shown especially in Figure 8, the toothbrush part 6 is also performed with a socket 14 having an aperture 15 and being fastened to the second pin. The socket 14 of the toothbrush part 6 is two-part, in such a way that the socket 12 of the second lid 4 slides in between the two parts.

As shown in Figure 3, 7 and 8, the cavity in the holder part 2 is divided into at least two rooms 20, 21 separated by a wall 22. The first room 20 is meant to embrace the toothbrush head 23 of the toothbrush part 6. When the combined article 1 is closed and not in use, the toothbrush head will thus be in a separate room 20. This room 20 is preferably performed with air/drain holes, so that the toothbrush head 23 can dry without the growth of bacteria. The holes should preferably be arranged so that they are open towards the surroundings and not into the other room 21. In the shown example there are a number of blowholes 24 at the end of the lid 3. Under the row of blowholes there is arranged a further hole 33. Between the hole 33 and the closest of the blowholes 24, one may, for instance, fasten a thin string, in such a way that the combined article for personal hygiene may be hung around the neck etc.

The row of blowholes 24 is on an end face being somewhat higher than the end of the lid 3. On each side of the end face there are arranged drain canals 34a, 34b. These have the function of draining any liquid flowing out through the blowholes 24 when the article is standing.

The other room 21 may for instance, embrace a tube of toothpaste or other small articles naturally belonging in the combined article.

Between the first room 20 and the second room 21, there is a compact wall 22. This wall 22 has a combined function. It both constitutes a physical border towards leaks of, for instance, shaving  
5 water, to the toothbrush head 23, and besides it performs a support/holder for a filling device 25 on the opposite side. This may be a filling device of the type described in NO patent application 20061062, described in further detail below.

In the holder part 3, it is arranged an air slit 35 into the other room 21. The air slit 35 is arranged close to the wall 22, and will function both regarding airing and draining of the other room 21.  
10 Further, there are arranged more blowholes 36 on both sides of the holder part 2, at the end being close to the second lid 4.

In a preferred embodiment, the second lid 14 is performed with a room division as shown in Figure 9. The lid is mainly separated in two rooms 16 and 17, where room 16 is used as storage place for the razor head 7. The rooms 16, 17 are separated with a wall 18, in such a way that the  
15 shape of room 16 is adjusted to the shape of the razor head 7. Preferably, it is arranged a further extension 19 into the room 16. Based on the way room 16 is shaped, the part of the razor head containing the razor blade, will not get in touch with any of the surfaces of the room 16. Thus, the razor head dries while being stored in the room 16.

The filling device 25, being shown in Figure 10a and 10b, comprises a first pipe part 26, and a  
20 second pipe part 27. The pipe parts 26, 27 are equipped with inner threads 28, 29. The first pipe part 26 has threads 28 fitting to for instance, a standard tube of toothpaste, and the other pipe part 27 has threads fitting to a tube being smaller and which may be stored in the second room 21. The filling device may thus be used to fill the smaller tube being stored in the combined article, from a tube of standard size.

25 The wall 22 between the first room 20 and the second room 21, has a shape being adjusted to the shape of the filling device 25. In the shown embodiment, the wall 22, seen from the second room 21, has a depression 30 having an inner form corresponding to the outer shape of the filling device 25 at the other pipe end 27. The filling device 25 may easily be drawn from the fastening in the wall 22, and is secure there as long as it is not in use. Figure 10a and 10b also shows knobs 31,  
30 for keeping the filling device 25 better in place.

The toothbrush head 23 is preferably replaceable, for instance in that it is arranged a detent lock, known per se. A knob 32 is preferably arranged on the upper side of the filling device 25. This knob may be used to tip out the replaceable toothbrush head 23.

Friction surfaces 37a, 37b are preferably arranged on the first lid 3 and the second lid 4, respectively. These are performed in a two-component solution, and as a rubbery surface to among others, improve the grip of the combined article for personal hygiene.

**Claims**

1. Combined article for personal hygiene, comprising a partly hollow holder part (2), a toothbrush part (6) and a fastening means (5) for a razor head (7), where the toothbrush part (6) is arranged to fold into the holder part (2), as the toothbrush part (6) has a first end being equipped with a hinge-means (13, 14) in such a way that the toothbrush part (6) is pivotally fastened to the holder part (2) and that the toothbrush part (6) has a second end equipped with a toothbrush head (23), **characterized** in that it is arranged a wall (22) in the partly hollow holder part (2), which wall (22) constitutes a physical separation between a first room (20) and a second room (21), in such a way that the second end of the toothbrush part (6) with the toothbrush head (23), is arranged to be folded into the first room (20), and that the wall at the same time constitutes a fastening for a filling device (25) known per se.
2. Article according to claim 1, **characterized** in that a first, substantially long lid (3) is arranged to be closed over the holder part (2) both when the toothbrush part (6) is folded and when the toothbrush part is (6) extended, as the first lid (3) is pivotally fastened at one end of the holder part (2), wherein the holder part (2) has an inner skirt fitting into an outer skirt of the lid part (3).
3. Article according to claims 1 or 2, **characterized** in that the fastening means (5) for the razor head (7) is arranged on a second lid (4), which is arranged to fit in the elongation of the holder part (2), and which has an outer shape substantially corresponding to the shape of the holder part (2), and where the second lid (4) is hollow, and being separated into mainly two rooms (16, 17) where room (16) is arranged to be storage for the razor head (7), as the shape of the room (16) is adjusted to the shape of the razor head (7) in such a way that the part of the razor head (7) holding the razor blades does not get in contact with any surface of the room (16).
4. Article according to any one of claims 1-3, **characterized** in that an air slit (35) into the second room (21) is arranged in the holder part (2), wherein the air slit (35) preferably is arranged close to the wall (22).
5. Article according to any one of claims 1-4, **characterized** in that it is arranged at the least one blowhole (24), preferably a row of blowholes (24) at the end of the first lid (3).
6. Article according to any one of claims 1-5, **characterized** in that the row of blowholes (24) is in an end face being higher than the end of the lid (3), and that drain canals (34a, 34b) are arranged on each side of the end face.

7. Article according to any one of claims 1-6, **characterized** in that it is arranged at the least a couple of blowholes(36) on each side of the holder part (2), at the end of the holder part (2) being close to the second lid (4).
- 5 8. Article according to any one of claims 1-7, **characterized** in that it is arranged first friction surfaces (37a) on each side of the first lid (3).
9. Article according to any one of claims 1-8, **characterized** in that second friction surfaces (37b) are arranged on the underside of the second lid (4), opposite to the side where the fastening
- 10 means (5) for the razor head (7) is placed.
10. Article according any one of claims 8-9, **characterized** in that the friction surfaces (37a, 37b) are made of a two-component solution, and has a rubbery surface.



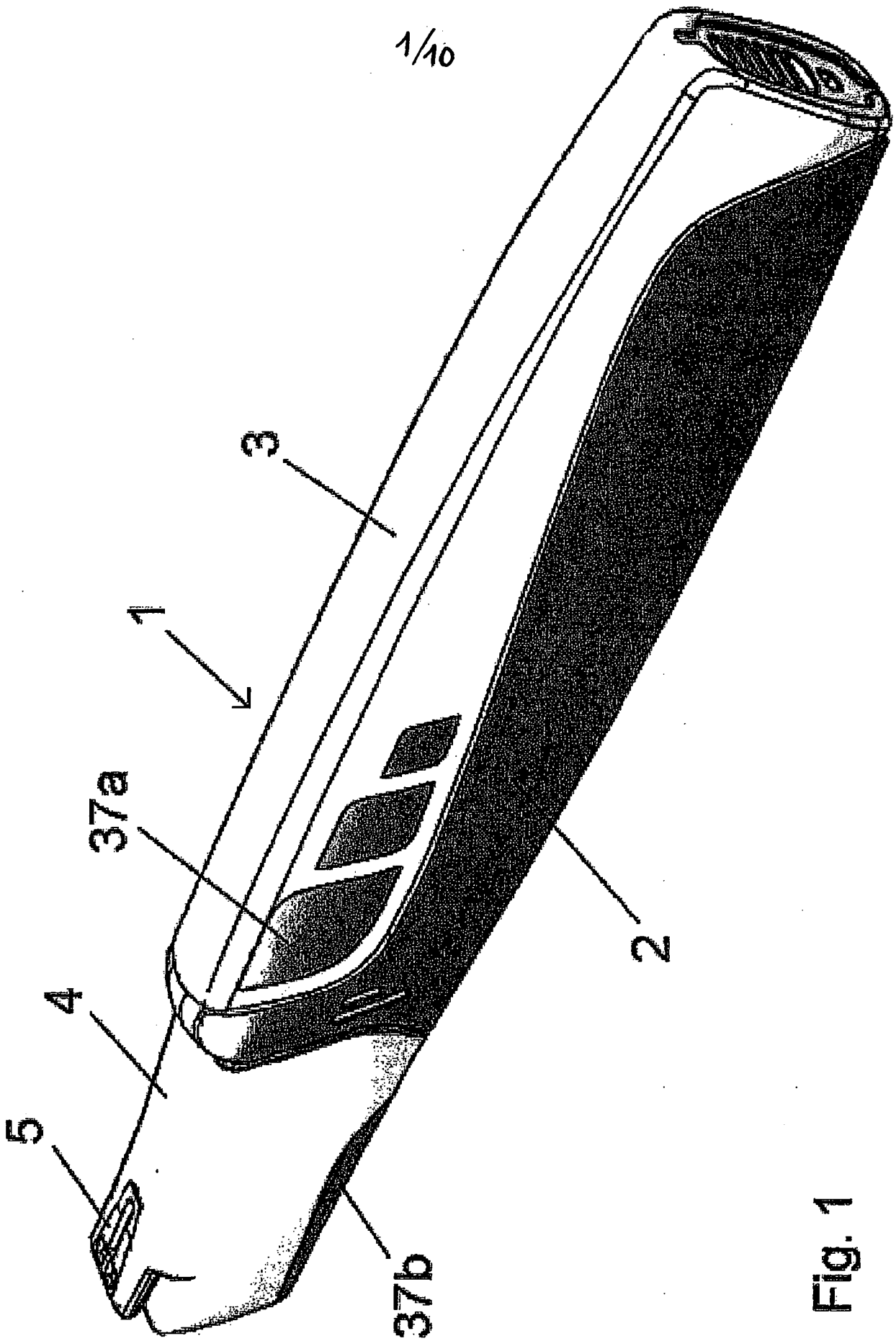


Fig. 1

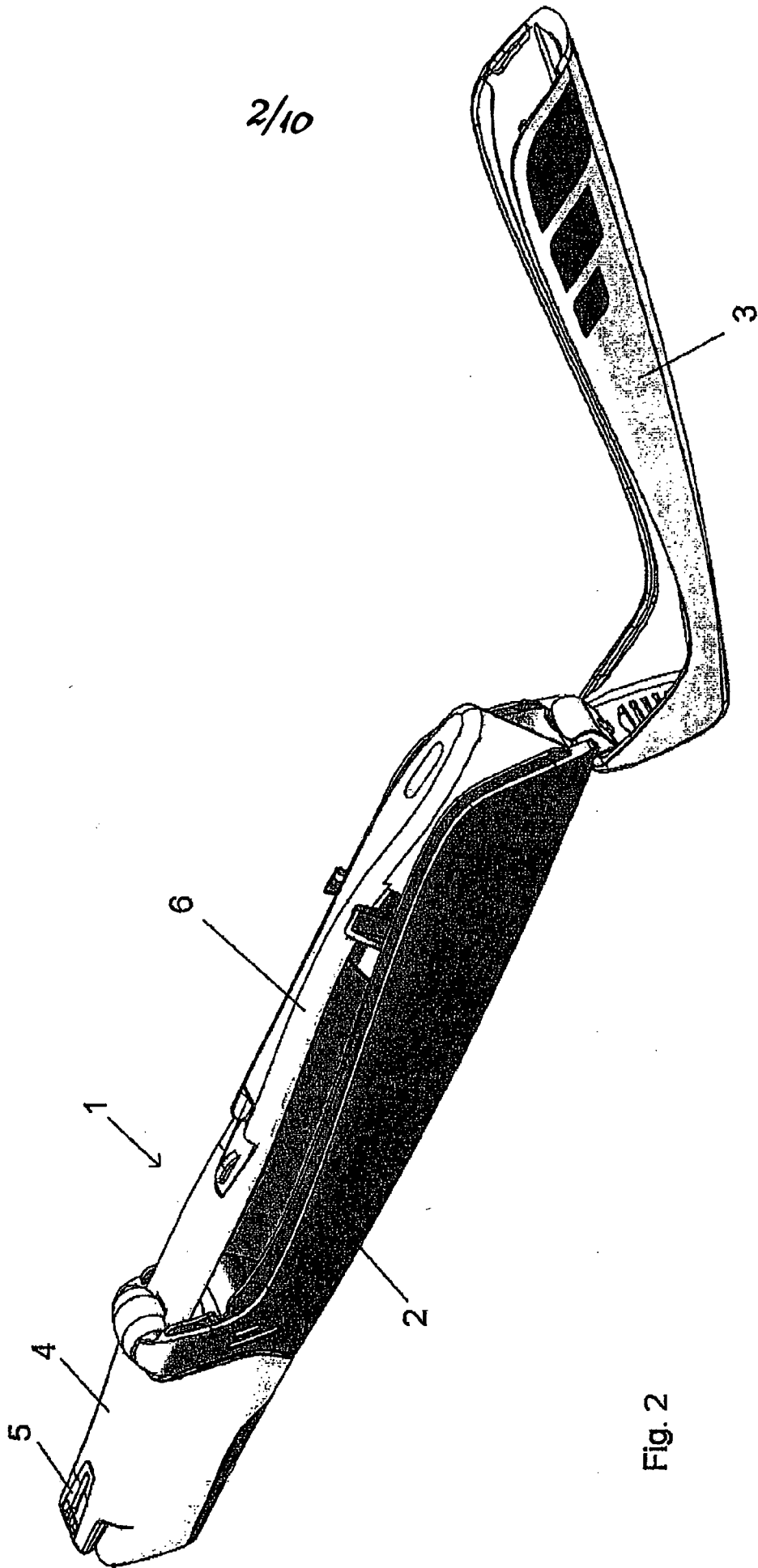


Fig. 2

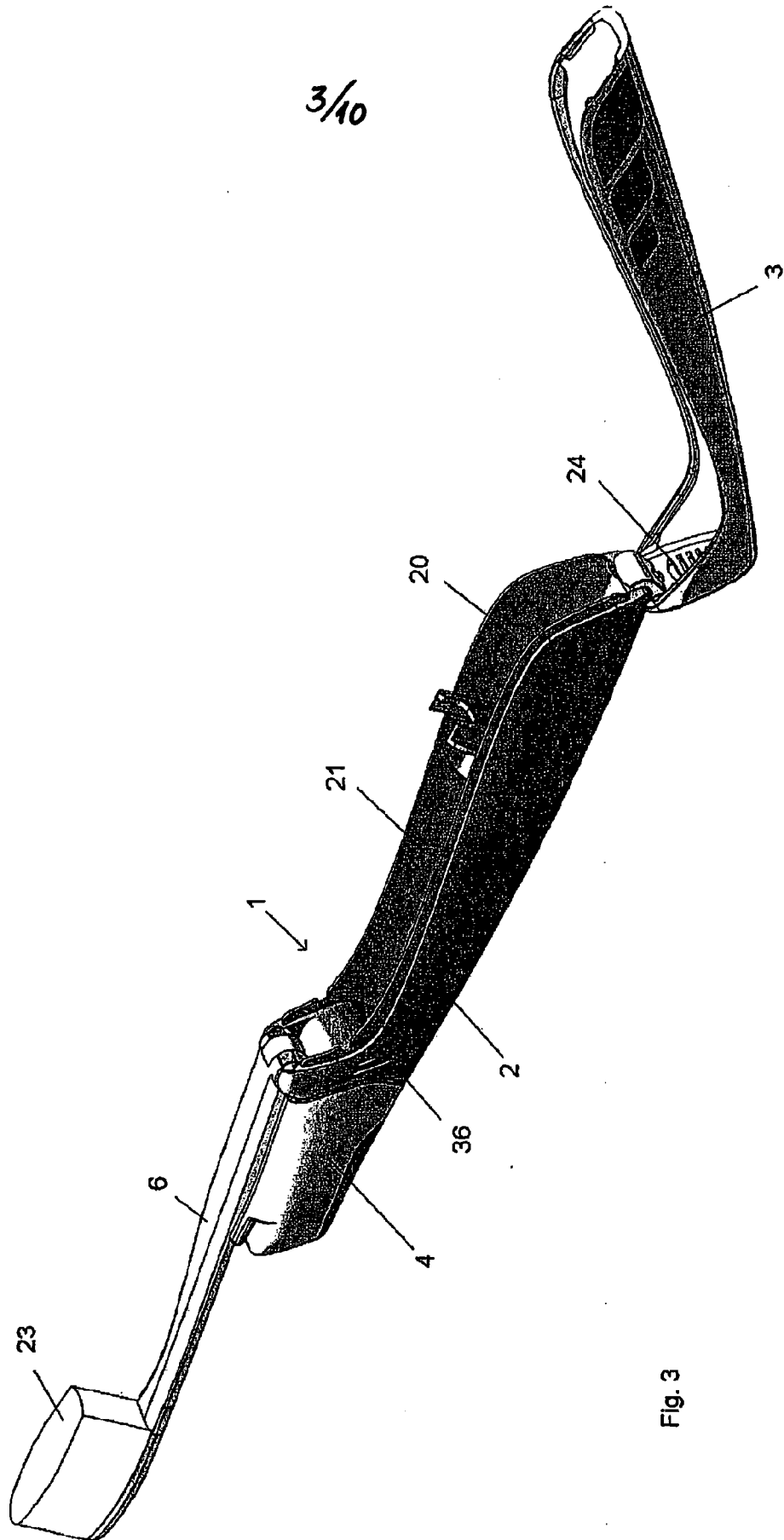


Fig. 3

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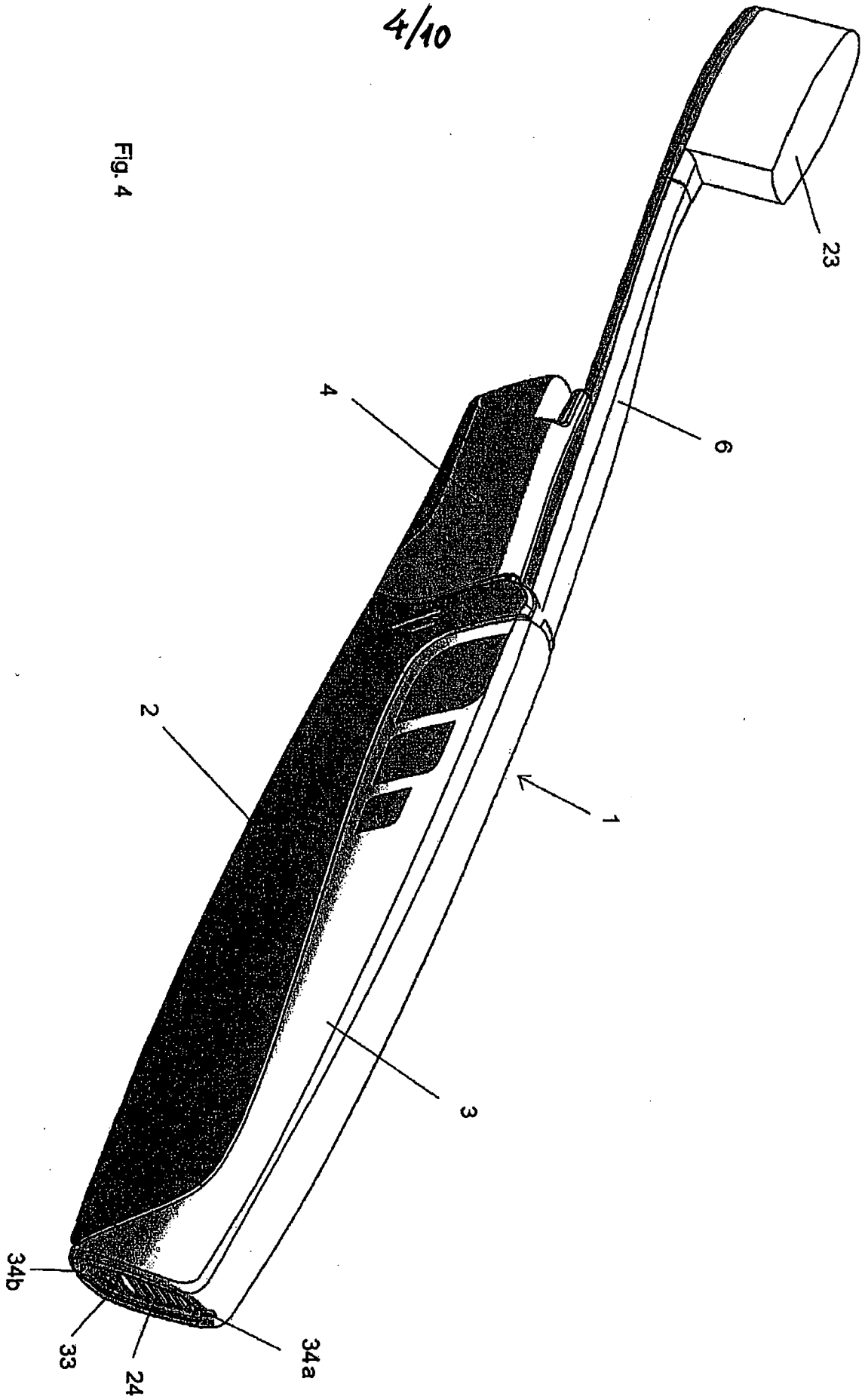


Fig. 4

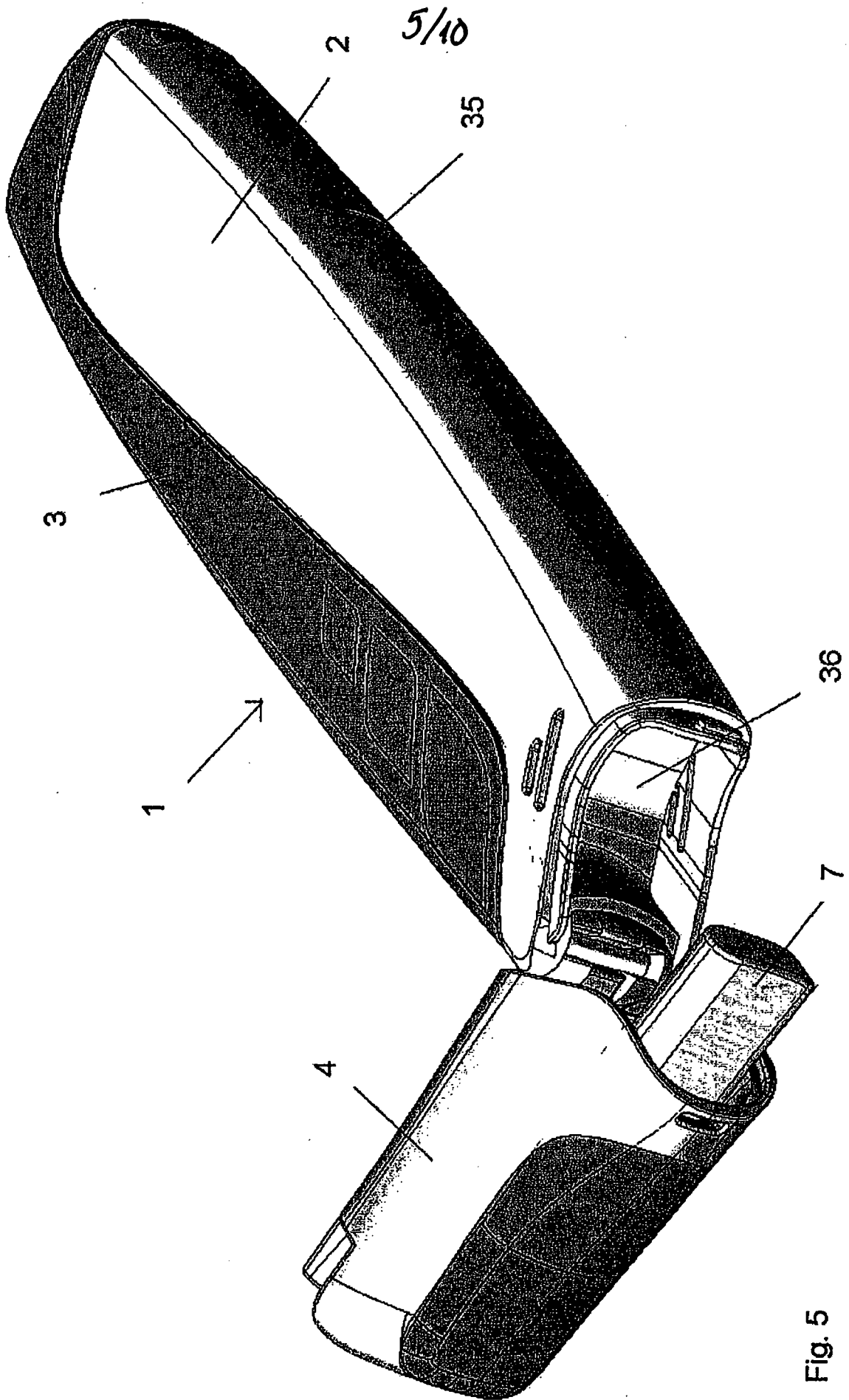


Fig. 5

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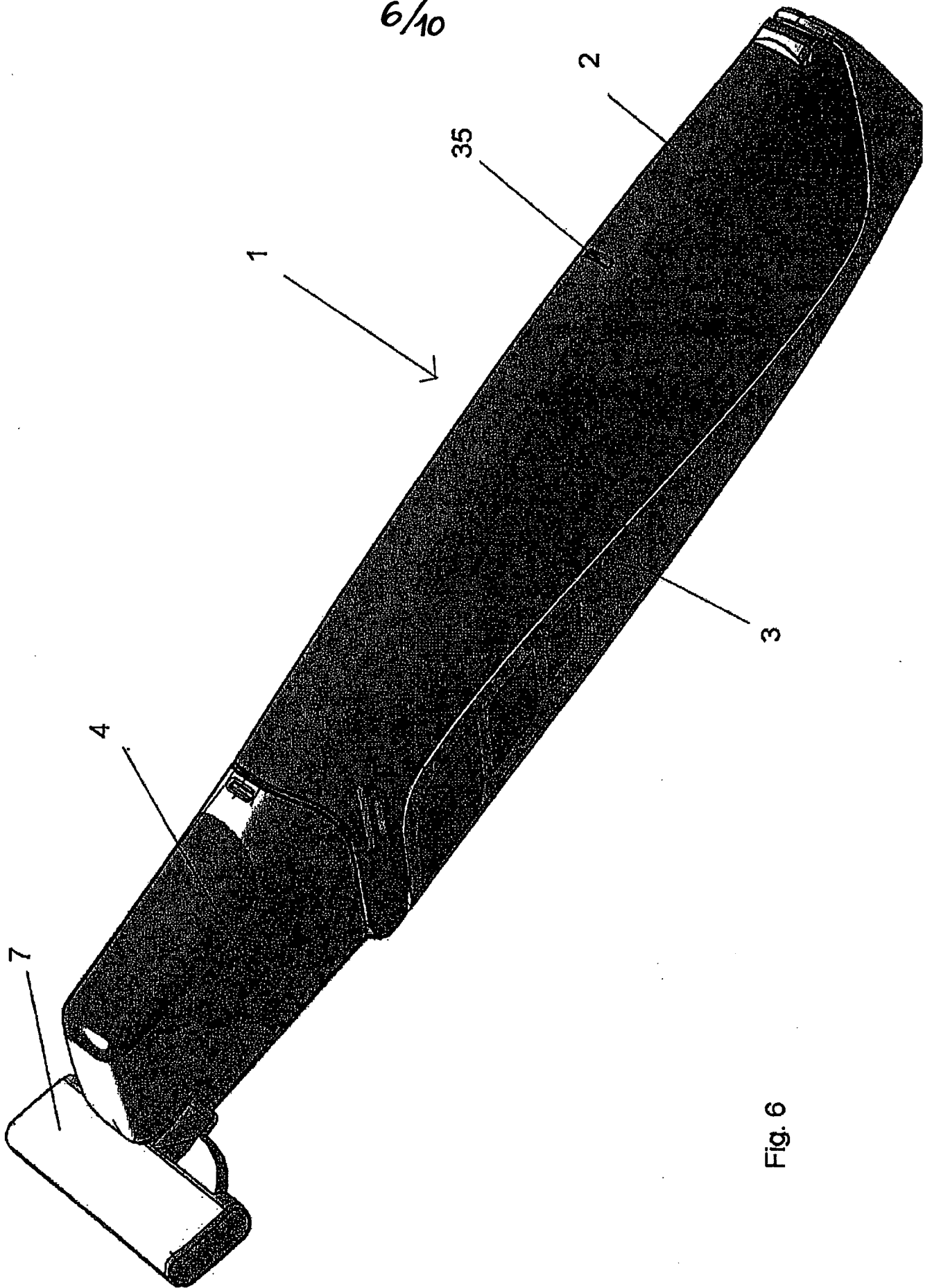
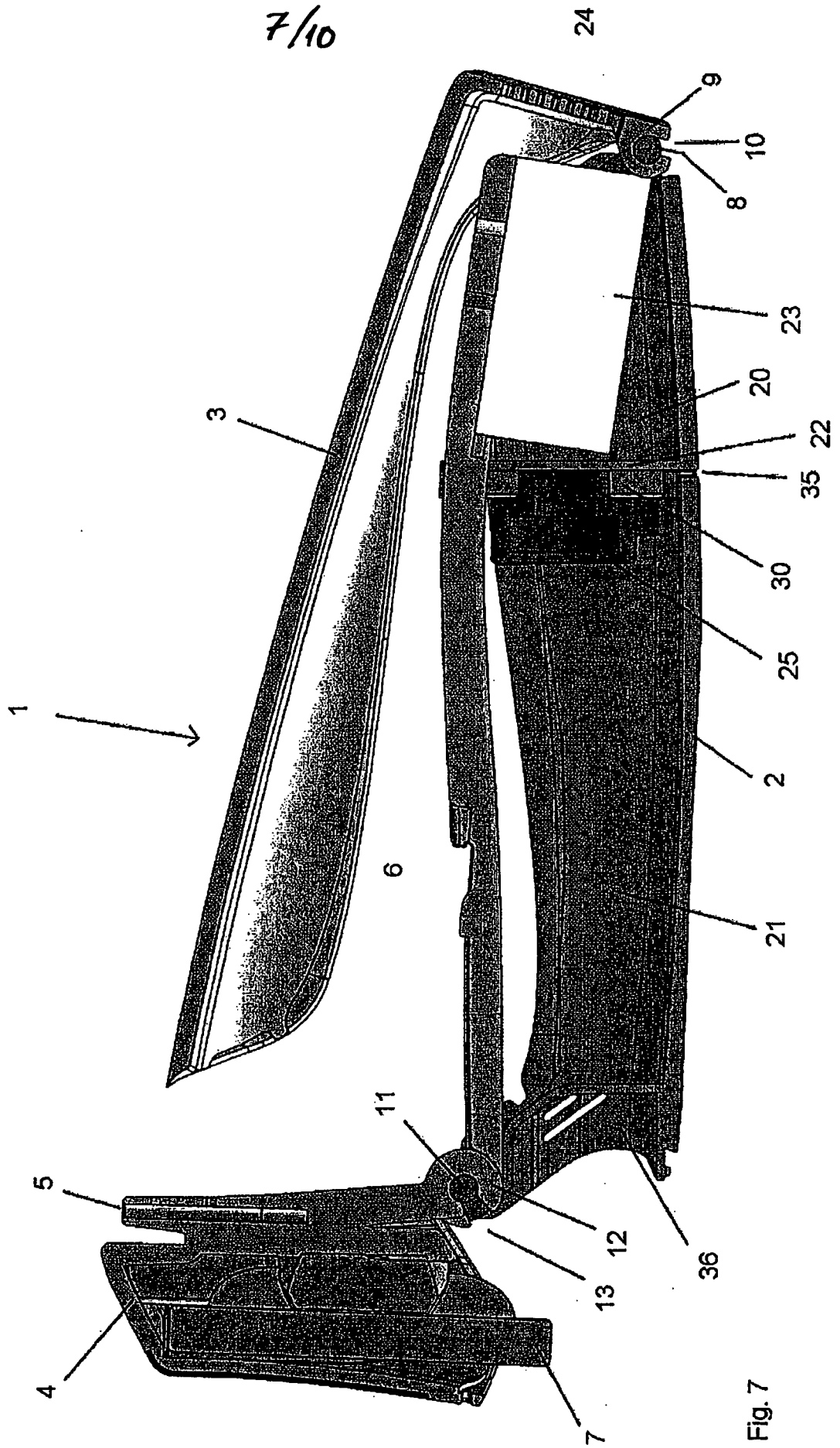


Fig. 6



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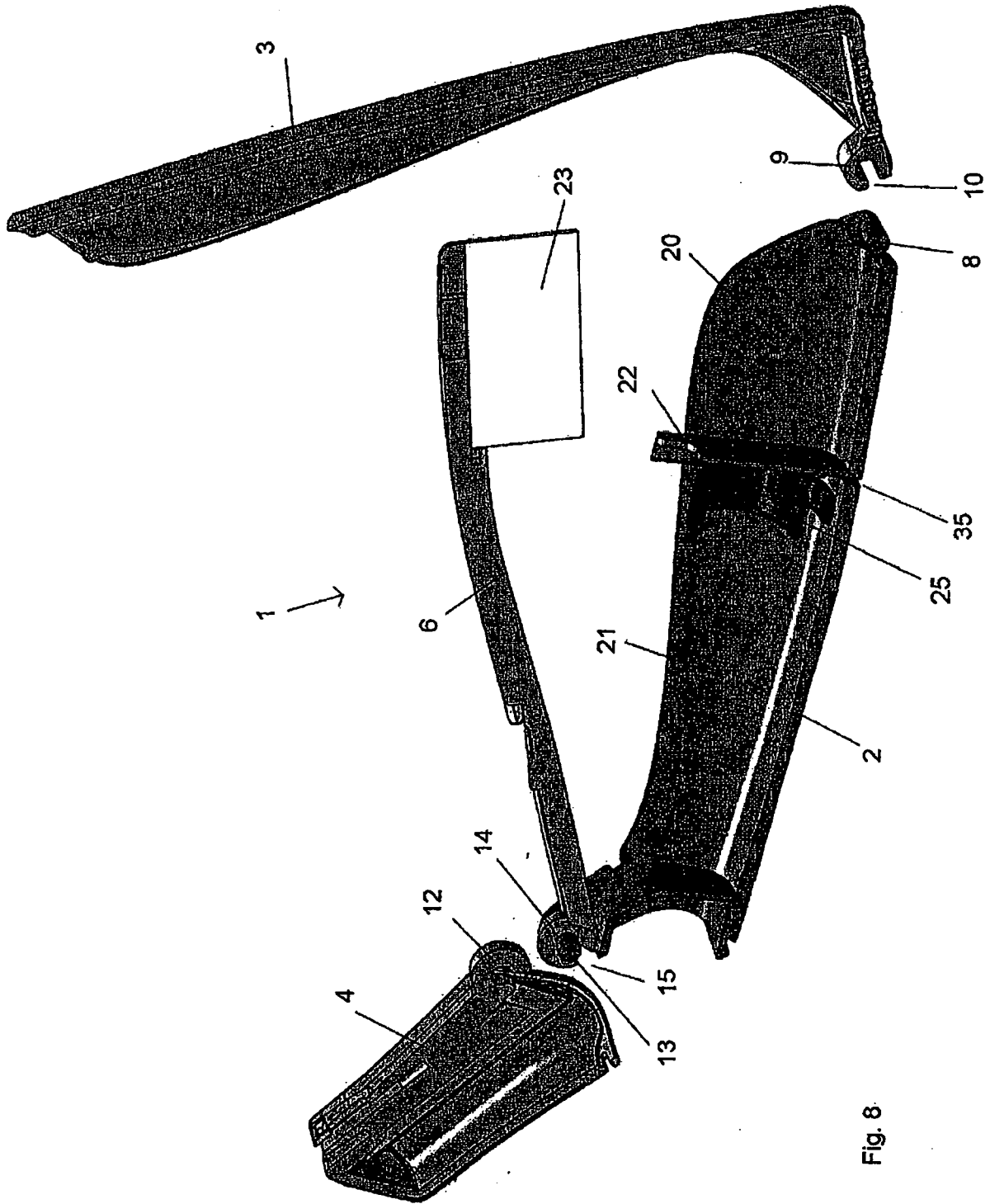


Fig. 8



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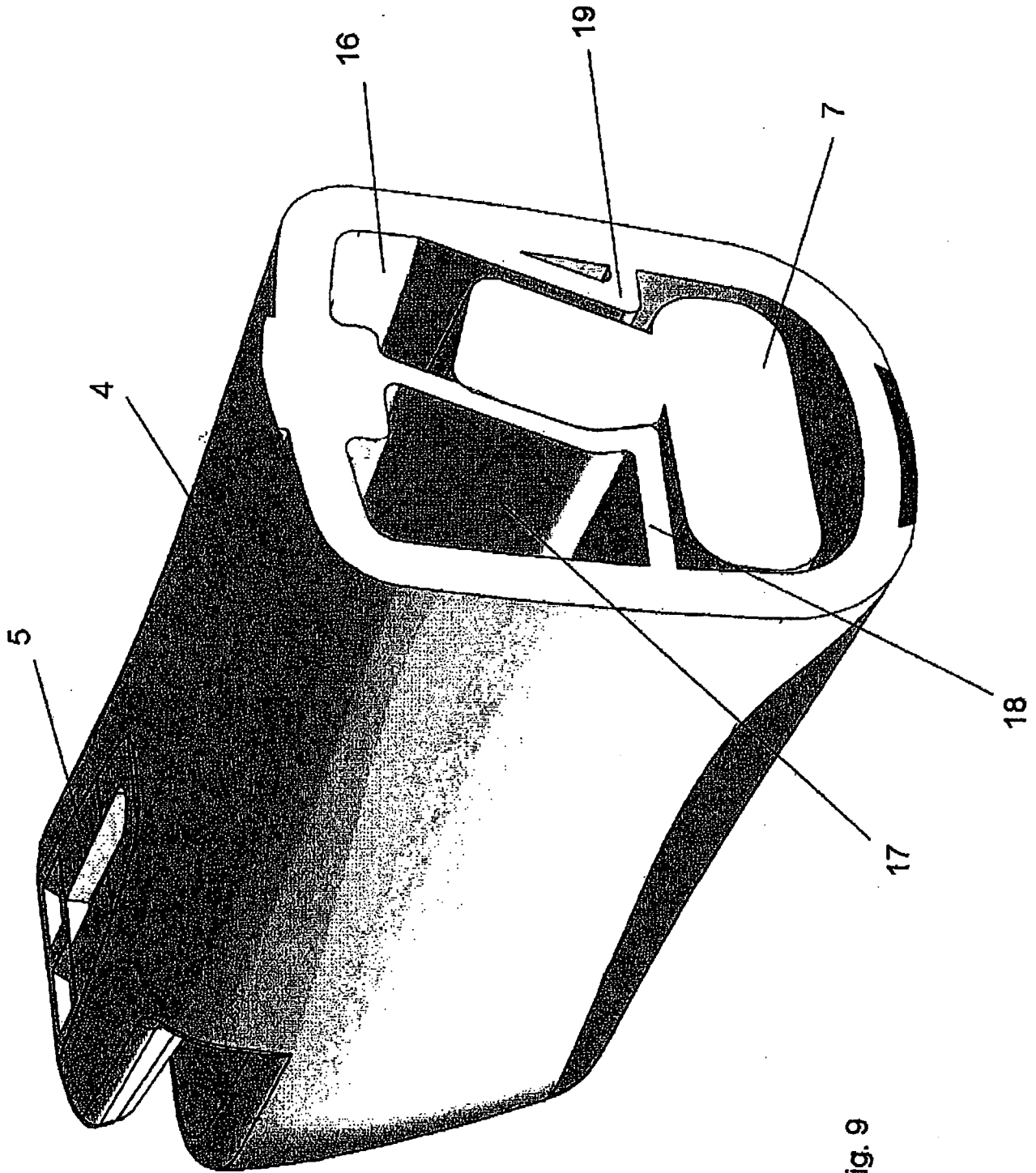


Fig. 9

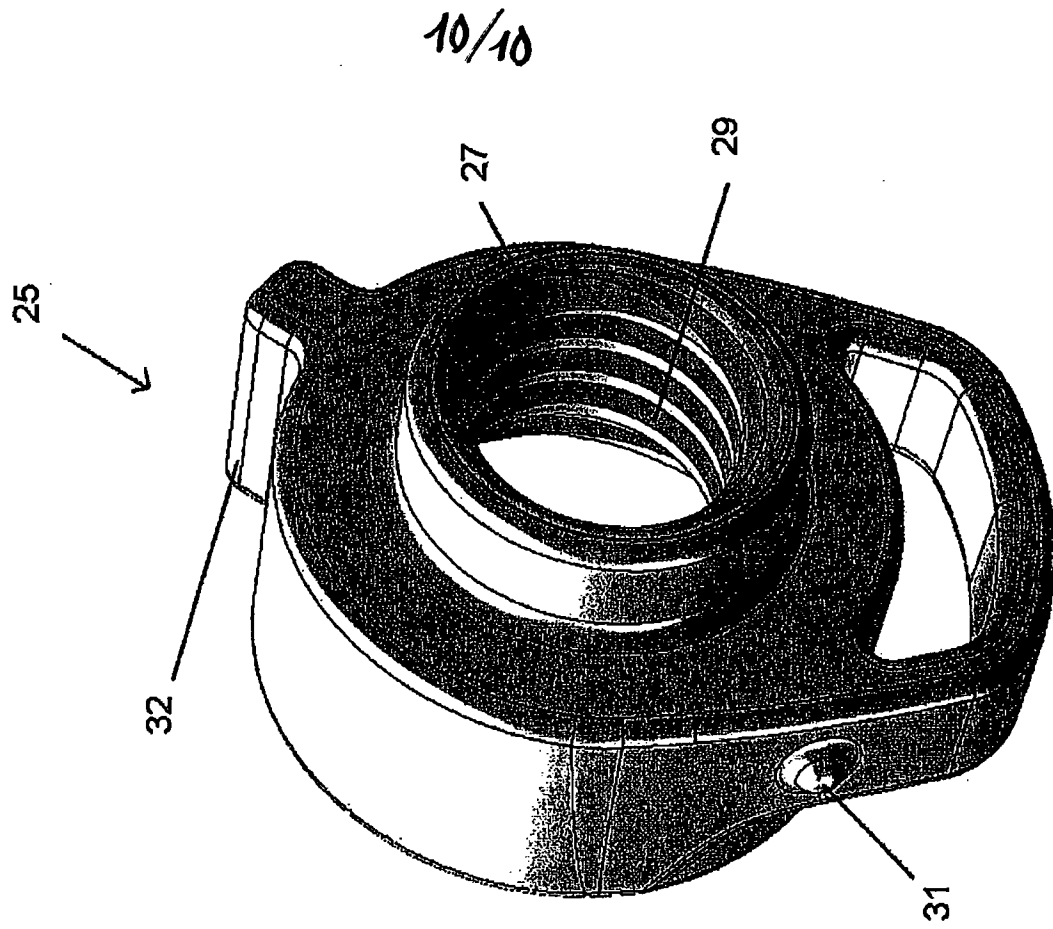


Fig. 10b

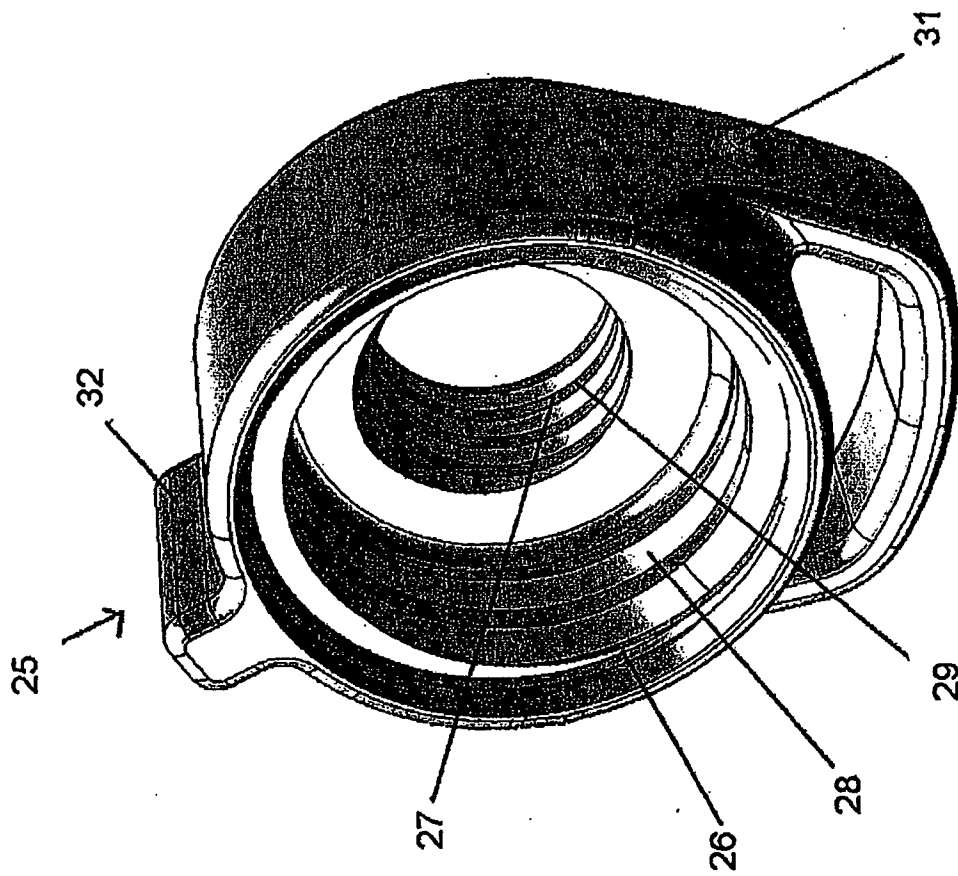


Fig. 10a

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO2008/000442

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: A46B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FI 107369 B (AJDARI, JAFAR, JÄKÄLÄTIE), 31 July 2001 (31.07.2001), figures 1-4, claims 1,2, 5,6,10, abstract --	1-10
A	WO 2005087047 A1 (PBL TECHNOLOGY LIMITED), 22 Sept 2005 (22.09.2005), figures 1-4,7, abstract --	1-10
A	DE 20014388 U1 (JANOUSC, E.), 25 January 2001 (25.01.2001), figure 1, abstract --	1-10
A	US 4760642 A (K.H. KWAK), 2 August 1988 (02.08.1988), figures 1,3, abstract --	1-10

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Date of the actual completion of the international search

13 February 2009

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO2008/000442

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2653696 A1 (SOCIETE GENERALE DE BROSSERIE S.G.B.), 3 May 1991 (03.05.1991), figures 1-5, abstract --	1-10
A	EP 0101297 A2 (GOTTO, R.J.), 22 February 1984 (22.02.1984), figures 1,15,16, abstract --	1-10
A	FR 2490084 A1 (SINAN, J.-M.), 19 March 1982 (19.03.1982), figures 1-3, claims 1-4 -- -----	1-10

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Cited literature, if any, will be enclosed in paper form.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

01/11/2008

International application No.  
PCT/NO2008/000442

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