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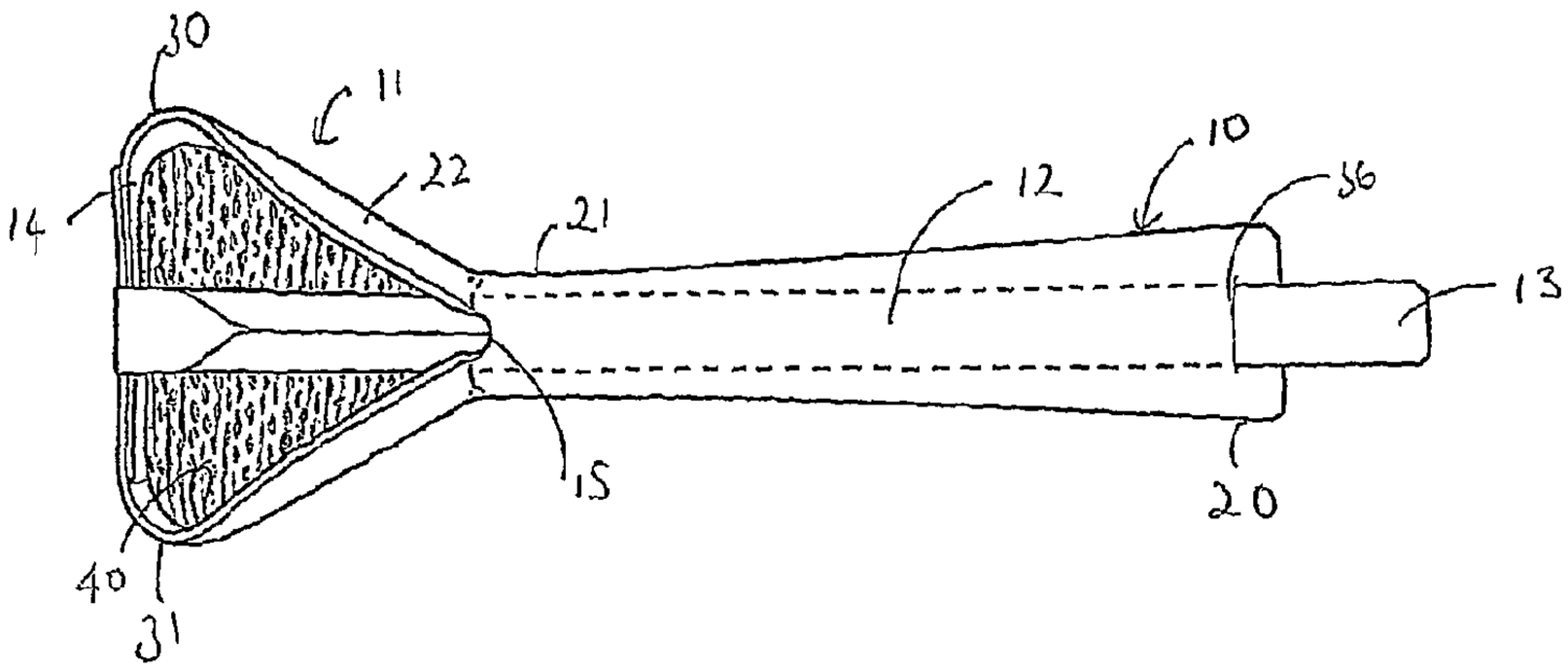

(57) Abrégé/Abstract:
A brewing device, particularly for brewing tea or coffee. In one embodiment, the steeping portion (11) is formed with the handle (10) and the squeezing means includes an actuator element (13) arranged to extend through the handle. Such a device is thus arranged to compress the steeping portion by means of a pulling action on the actuator element. In an alternative embodiment, the squeezing means is formed with the handle (51) and the steeping portion is formed with an actuator element (54) arranged to extend through the handle. By such an arrangement, the device is arranged to compress the steeping portion by means of a pushing or pressing action on the actuator element.

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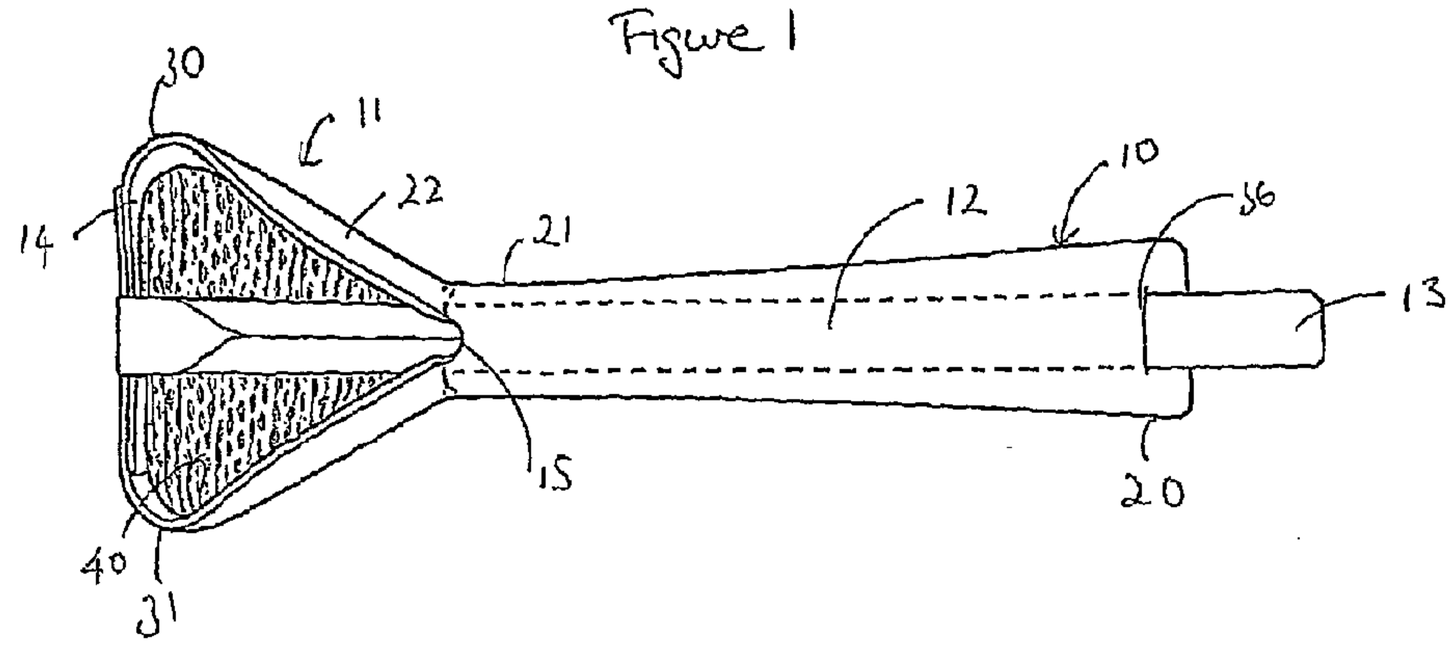
(54) **Title**: BREWING DEVICE

Figure 1



(57) **Abstract**: A brewing device, particularly for brewing tea or coffee. In one embodiment, the steeping portion (11) is formed with the handle (10) and the squeezing means includes an actuator element (13) arranged to extend through the handle. Such a device is thus arranged to compress the steeping portion by means of a pulling action on the actuator element. In an alternative embodiment, the squeezing means is formed with the handle (51) and the steeping portion is formed with an actuator element (54) arranged to extend through the handle. By such an arrangement, the device is arranged to compress the steeping portion by means of a pushing or pressing action on the actuator element.

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Brewing device

The present invention relates to brewing devices, particularly to a brewing device for brewing tea or coffee.

Tea and coffee are typically prepared by infusion brewing, i.e., by steeping tea leaves or coffee grounds in hot water. A variety of devices are available for separating spent coffee grounds or tea leaves from a brewed drink. For example, a French press uses a mesh filter fitted to a plunger to extract spent coffee grounds from the brew. When brewing loose-leaf tea, it is traditional to use a tea infuser. A commonly-used tea infuser comprises a mesh cage, which separates the tea leaves from the brew during steeping. The press and mesh cage must each be emptied and cleaned after use.

The present invention seeks to provide a brewing device for brewing tea or coffee by infusion. It is an aim of the present invention to provide a single-use device that is convenient, cost-effective to produce and simple to use.

In one aspect, the present invention provides a brewing device comprising a handle portion and a steeping portion, wherein the device further comprises steeping portion compressing or squeezing means.

Preferably, the steeping portion is resiliently deformable, more preferably, the steeping portion is reversibly deformable.

Preferably, the steeping portion comprises a frame, more preferably a triangular or circular frame.

Preferably, the squeezing means comprises a strip, strap, film or string, which engages at least a part of the frame of the steeping portion.

Preferably, the frame is triangular and the squeezing means engages an edge of the frame, such that, in use, operation of the squeezing means comprises the frame between the edge and an apex of the triangular frame.

Suitably, the handle is formed as an elongate element, preferably tubular.

In one embodiment, the steeping portion is formed with the handle and the squeezing means includes an actuator element arranged to extend through the handle. Such a device is thus arranged to compress the steeping portion by means of a pulling action on the actuator element.

In an alternative embodiment, the squeezing means is formed with the handle and the steeping portion is formed with an actuator element arranged to extend through the handle. By such an arrangement, the device is arranged to compress the steeping portion by means of a pushing or pressing action on the actuator element.

In a preferred embodiment, the brewing device is made substantially from paper, preferably waxed or water-resistant paper.

In preferred embodiments, the squeezing means is made from paper, preferably, waxed or water-resistant paper.

Advantageously, the squeezing means comprises locking means. Preferably, the locking means comprises at least projection for engaging the handle portion. Suitably, the projection is a barb, flap or stud.

In one embodiment, at least one barb has a first configuration, in which it is flush with the squeezing means and a second configuration, in which it projects from the squeezing means. Conveniently, in its second configuration, the barb engages the handle portion.

In one embodiment, the brewing device is packaged with a porous bag containing loose-leaf tea, broken-leaf tea, fannings or ground coffee. Preferably, the porous bag is retained by the steeping portion. In one embodiment, the porous bag is secured to the steeping portion by means of an adhesive strip.

Advantageously, the device comprises at least one compartment for storing powdered milk, sugar, sweetener or a mixture thereof. Suitably, at least one compartment is provided on an exterior wall of the handle portion or within the actuator element.

The above and other aspects of the present invention will now be described in further detail, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates two perspective views of a first embodiment of a brewing device in accordance with the present invention;

Figure 2 illustrates a porous bag suitable for use with the embodiment of Figure 1;

Figures 3a and 3b are a series of partial perspective views of the embodiment 1, illustrating locking of the squeezing means;

Figure 4 illustrates two perspective views of the embodiment of Figure 1, showing the apparatus in use;

Figure 5 is a perspective view of a second embodiment of a brewing device in accordance with the present invention, in a first configuration;

Figure 6 is a perspective view of the embodiment of Figure 5 in a second configuration;

Figure 7 illustrates the operation of the embodiment of Figure 5 in use; and

Figure 8 illustrates a storage compartment in the embodiment of Figure 5.

Figure 1 illustrates a brewing device having a handle 10, a steeping portion 11 and a squeezer strip 12. Handle 10 is a hollow element having a grip end 20 and a stirring end 21. Steeping portion 11 adjoins stirring end 21 of handle 10. Squeezer strip 12 engages steeping portion 11 and handle 10. In particular, squeezer strip 12 engages an edge 14 of steeping portion 11 and is received by an open base of stirring end 21 of handle 10. Squeezer strip 12 extends from stirring end 21 to grip end 20. Grip end 20 has a sealed top, adjacent which is a slit 36 for engaging squeezer strip 12.

Steeping portion 11 comprises a generally triangular-shaped frame 22. A porous bag 40, containing tea leaves or coffee grounds, is retained in triangular frame 22. Bag 40 has an adhesive strip 39 for attaching bag 40 to frame 22. Triangular frame 22 has an upper apex 15 and two lower apices 30, 31. Upper apex 15 adjoins stirring end 21 of handle 10. Opposite apex 15 is edge 14.

A first end of squeezer strip 12 comprises a loop that encircles steeping portion 11. In particular, the loop encircles edge 14 of triangular frame 22. A second end of squeezer strip 12 comprises an actuator element in the form of tab 13. Tab 13 projects from slit 36. Locking means, in the form of a plurality of barbs 37, is provided on squeezer strip 12 (Figures 3a and 3b). In one embodiment, barbs 37 have a first configuration in which they are flush with squeezer strip 12, and a second configuration, in which they project outwards from squeezer strip 12 (Figure 3a). The second configuration is obtainable by bending squeezer strip 12.

Squeezer strip 12 is operated by pulling tab 13 in a direction that is away from frame 22 and perpendicular to edge 14. Triangular frame 22 is reversibly deformable, and in particular, edge 14 can be moved towards, and away-from, apex 15 by operation of squeezer strip 12. Movement of edge 14 towards apex 15 causes compression of bag 40 retained within triangular frame 22. Once the pulling force is removed from tab

13, squeezer strip 12 will relax and frame 22 will return to its original, non-compressed, configuration.

In certain embodiments, handle 10 includes one or more storage compartments (not shown) for storing a portion of powdered milk, sugar or artificial sweetener (or mixture thereof). Conveniently, the compartment is formed on an outer wall of handle 10.

It is intended that the brewing device of the present invention will be packaged with a porous bag 40, containing either tea leaves or coffee grounds, retained in steeping portion 11. In use of the brewing device, steeping portion 11 (and bag 40, retained therein) is submerged in a cup of hot water and stirred using handle 10. During steeping, tab 13 can be pulled (to compress bag 40) and released, in order to speed-up the infusion process. Once a drink has been prepared, the device is removed from the water and tab 13 is pulled to squeeze liquid from bag 40. Tab 13 can be pulled and released several times to squeeze additional liquid tea or coffee from bag 40. Prior to disposal of the device, barbs 37 are aligned adjacent slit 36 (Figures 3a and 3b) by pulling tab 13. Tab 13 is held in this final, locked, position by engagement of one of barbs 37 with handle 10.

A second embodiment 50 is illustrated in Figures 5 to 9. This embodiment is arranged to provide a "push to squeeze" operation, but the construction is broadly similar. Handle 51 is formed integrally with squeezing strip 52. Frame 53 of the steeping portion is formed integrally with squeezing actuator element 54 which passes within handle 51. Actuator element 54 and handle 51 are conveniently both tubular. As can be seen by a comparison of Figure 5 and Figure 6 and also from Figure 7, pushing down on squeezing actuator 54 causes the lower edge of frame 53 to pull upwards against a bag 55 positioned within the frame, thereby compressing the bag 55 against a lower portion of frame 53, restrained by squeezing strip 52.

As shown in Figures 5 to 7, advantageously, this embodiment of the brewing device also includes locking means into the form of a series of studs 60 formed on squeezing actuator 54 engageable with an aperture 61 formed in corresponding location in handle 51.

As shown in Figure 8, suitably tubular actuator element 54 forms or includes a container to contain sugar or powdered milk or cream; or a mixture of the two, sealed by a cap or seal 62. It will be appreciated that the container will also have a closure at a lower end to retain the powdered materials.

The brewing device of the present invention is intended as a single-use product, sold as a factory-assembled unit. Since the device is not intended to brew multiple servings of tea or coffee, the handle and steeping portions can be formed entirely from paper, preferably waxed or water-resistant paper. Consequently, the device is simple and cost-effective to produce, as well as being straightforward to recycle. Furthermore, once a drink has been prepared, the device and bag can be disposed of as a single unit.

CLAIMS:

1. A brewing device comprising a first part comprising a handle portion with an integral first frame portion including an end proximal said handle and an end distal said handle, a second part comprising an actuator arranged to extend through said handle and an integral second frame portion including an end proximal said actuator and an end distal said actuator, said first and second frame portions cooperating, with distal ends of said first and second portions in contact, to provide a reversibly deformable steeping portion for retaining a porous filter bag, wherein relative motion of said handle and actuator urges said distal ends towards each other to deform, and change the volume of said steeping portion and the retained filter bag.

2. A brewing device as claimed in claim 1, wherein said second frame portion is reversibly deformable, and wherein said relative motion deforms said second frame portion to reduce the volume of said steeping portion and the retained filter bag.

3. A brewing device as claimed in claim 1, wherein said first frame portion is reversibly deformable, and wherein said relative motion deforms said first frame portion to reduce the volume of said steeping portion and the retained filter bag.

4. A brewing device as claimed in any one of claims 1-3 wherein said reversibly deformable portion is resiliently deformable.

5. A brewing device as claimed in any one of claims 1-4 wherein at least one of the frame portions is triangular or circular

6. A brewing device as claimed in any one of claims 1-5 wherein the handle is formed as an elongate element, preferably tubular.

7. A brewing device as claimed in any one of claims 1-6, further comprising locking means to retain said steeping portion in a deformed·orientation.

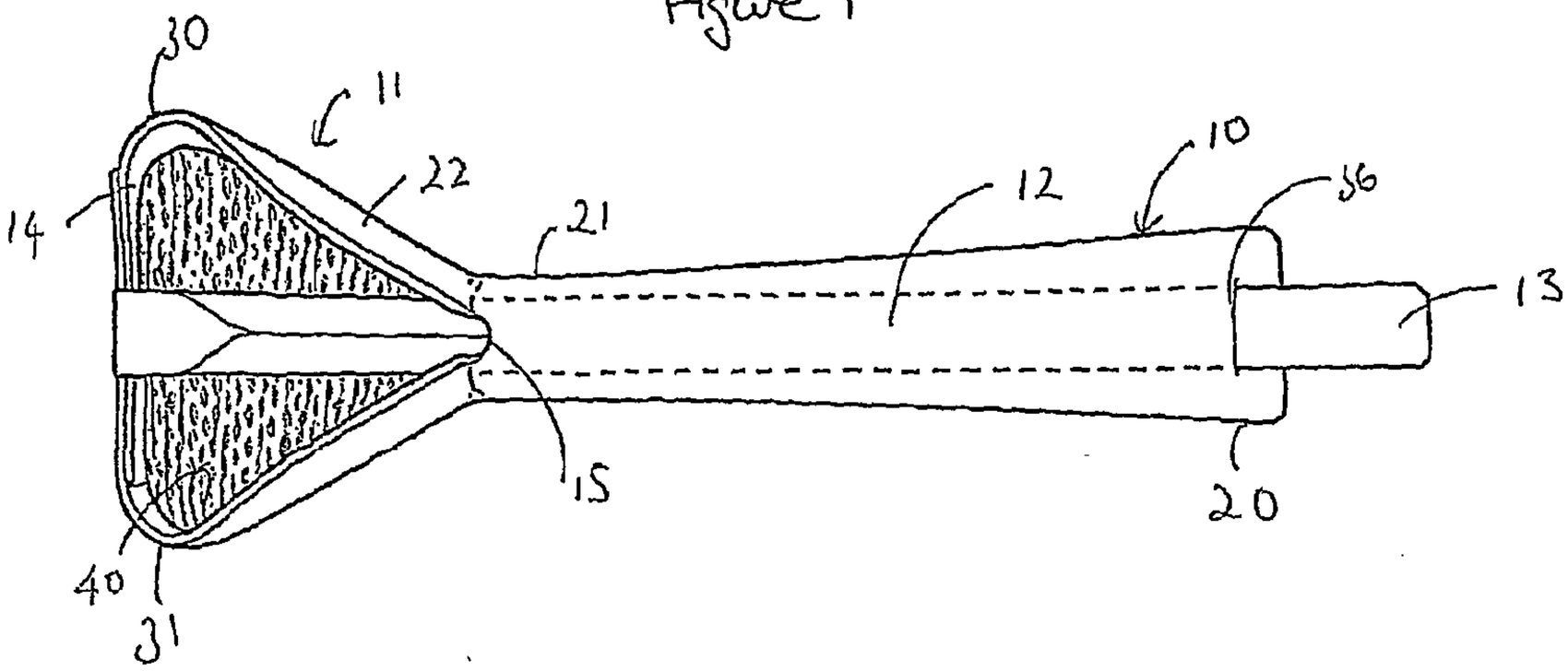
8. A brewing device as claimed in claim 7, wherein said locking means comprises at least one barb, flap or stud on the actuator for engaging said handle portion.

9. A brewing device as claimed in claim 8, wherein said at least one barb has a first non-locking configuration in which it is flush with the actuator and a second locking configuration in which it projects from the actuator, said second configuration being obtainable by bending the actuator.

10. A brewing device as claimed in any one of claims 1-9 formed substantially from paper, preferably waxed or water resistant paper.

11. A brewing device as claimed in any one of claims 1-10, wherein the handle portion further comprises a compartment for storing powdered milk, sugar, artificial sweetener, or mixtures thereof.

Figure 1



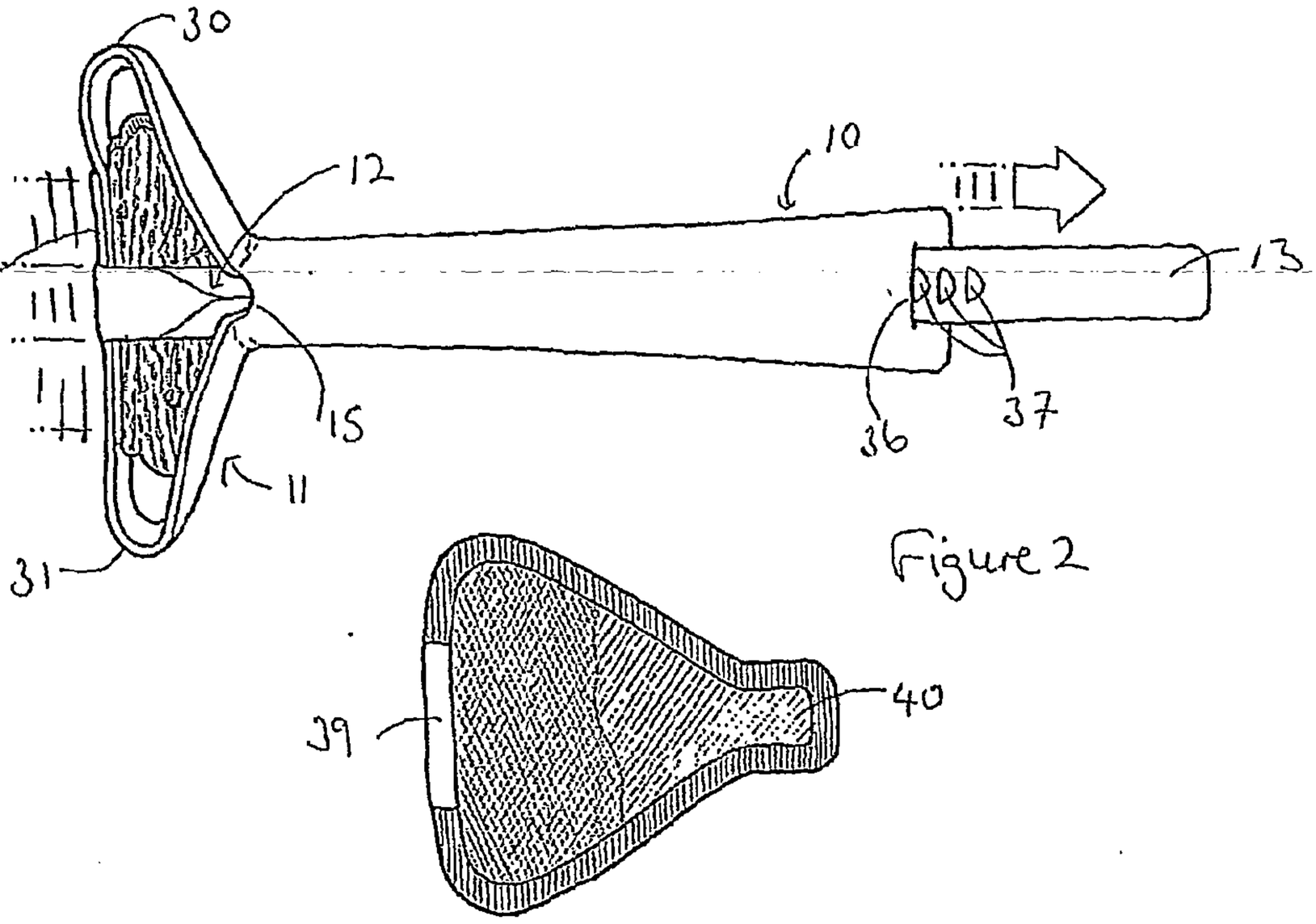


Figure 2

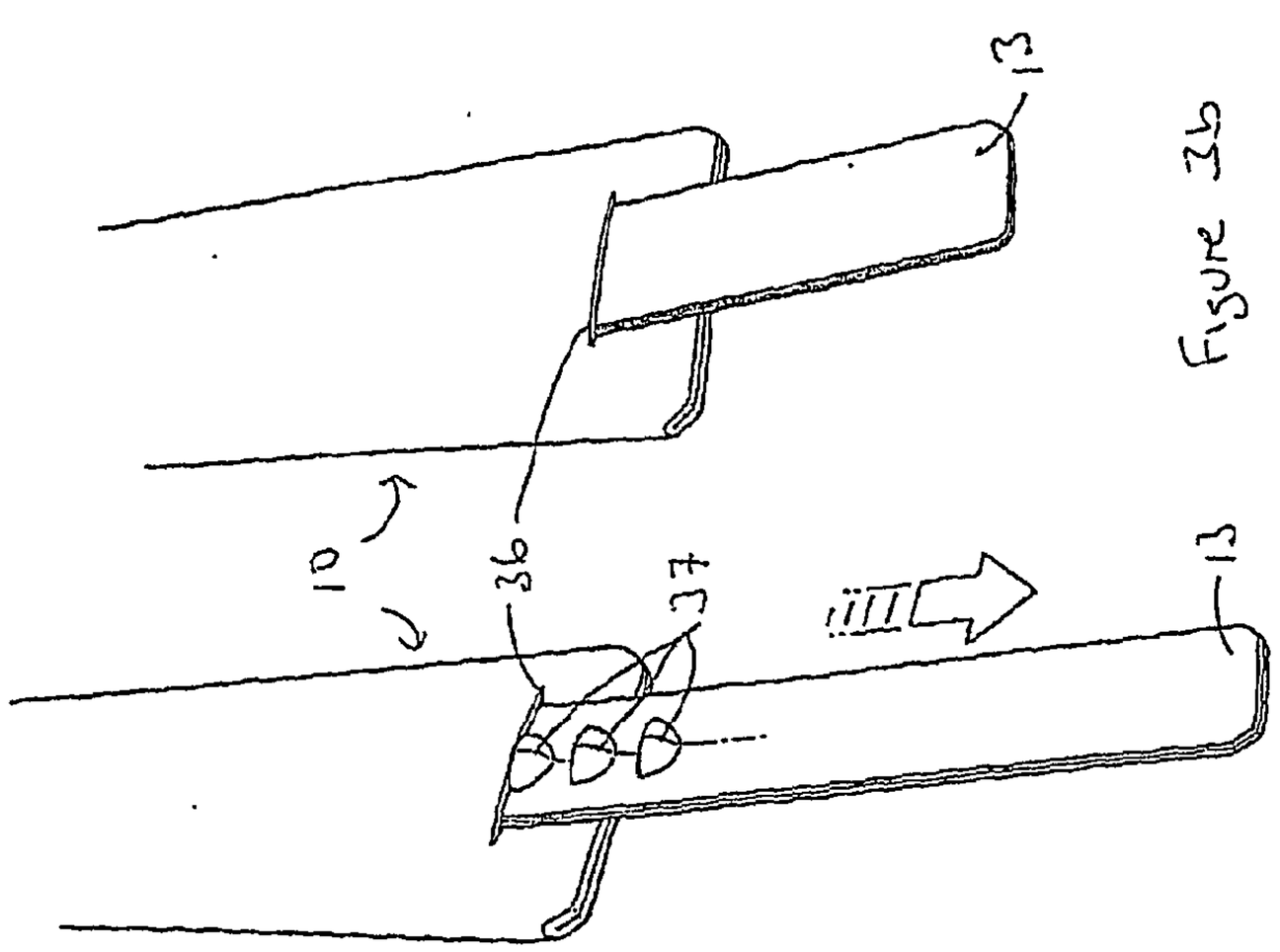


Figure 3b

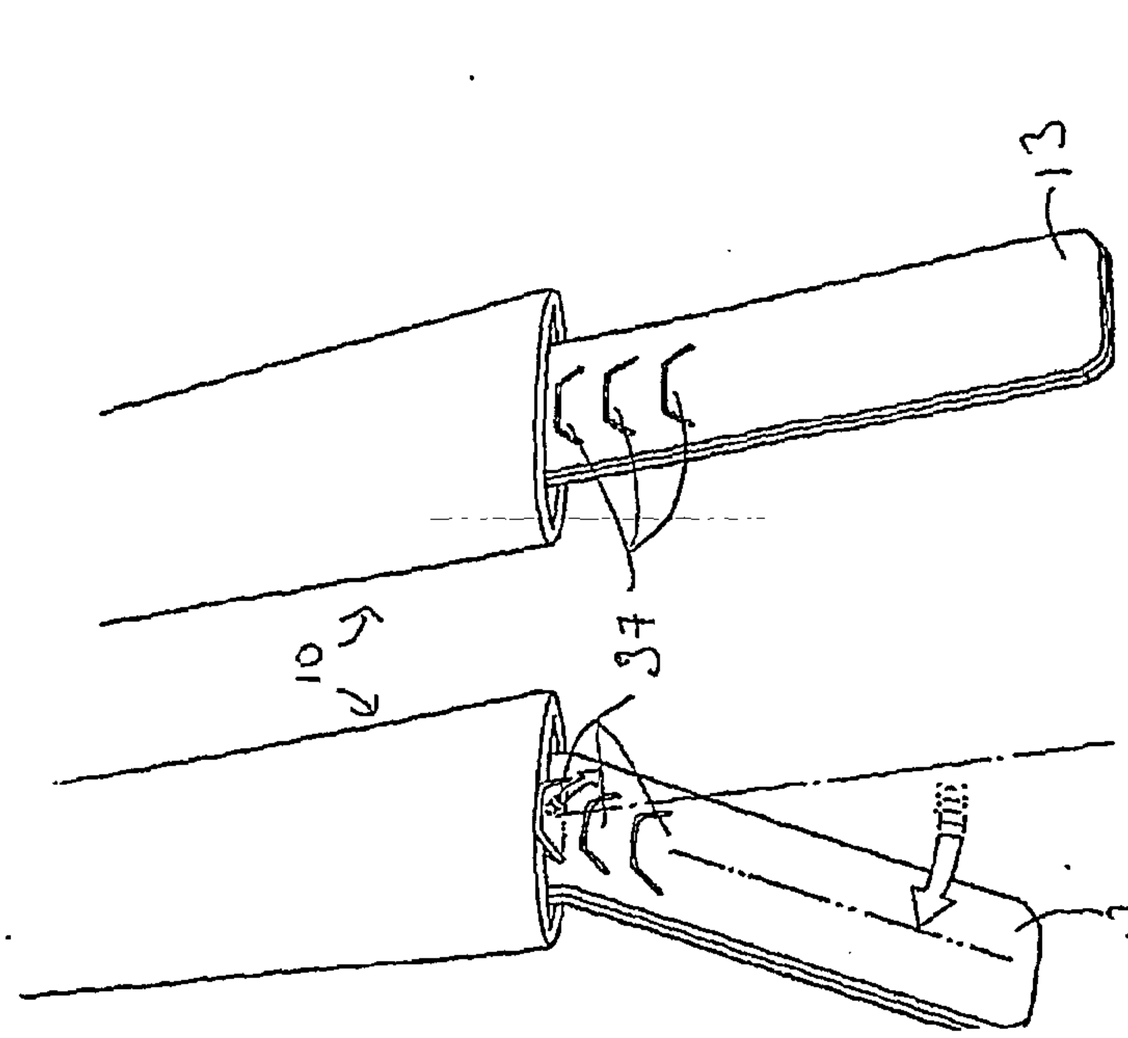


Figure 3

Figure 4

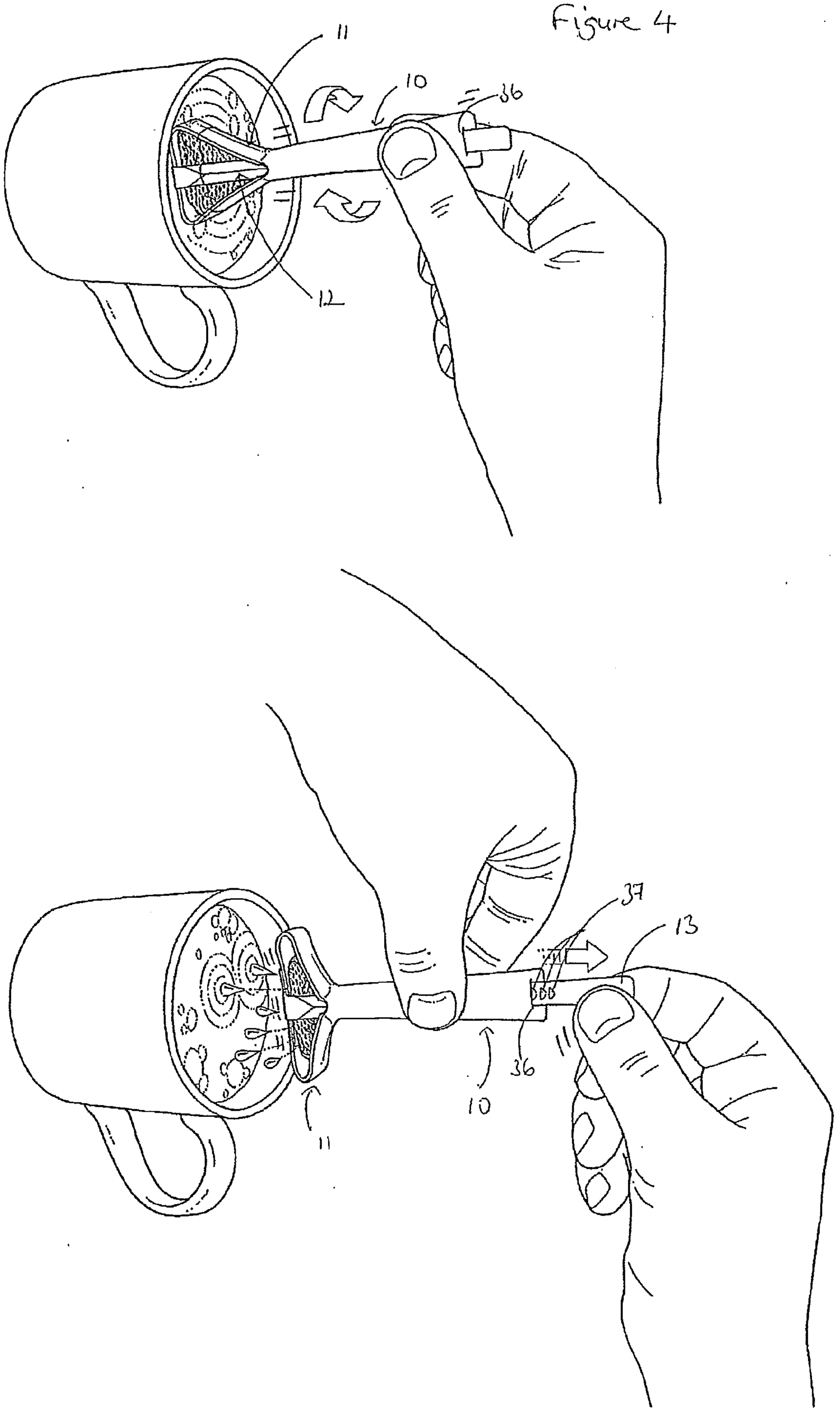


FIG 5

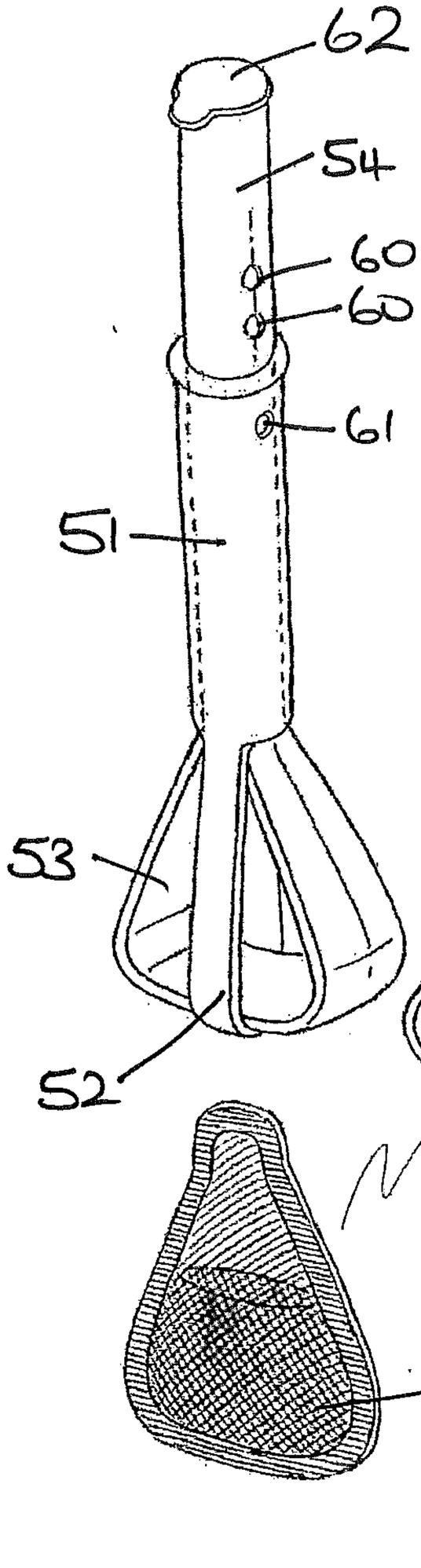
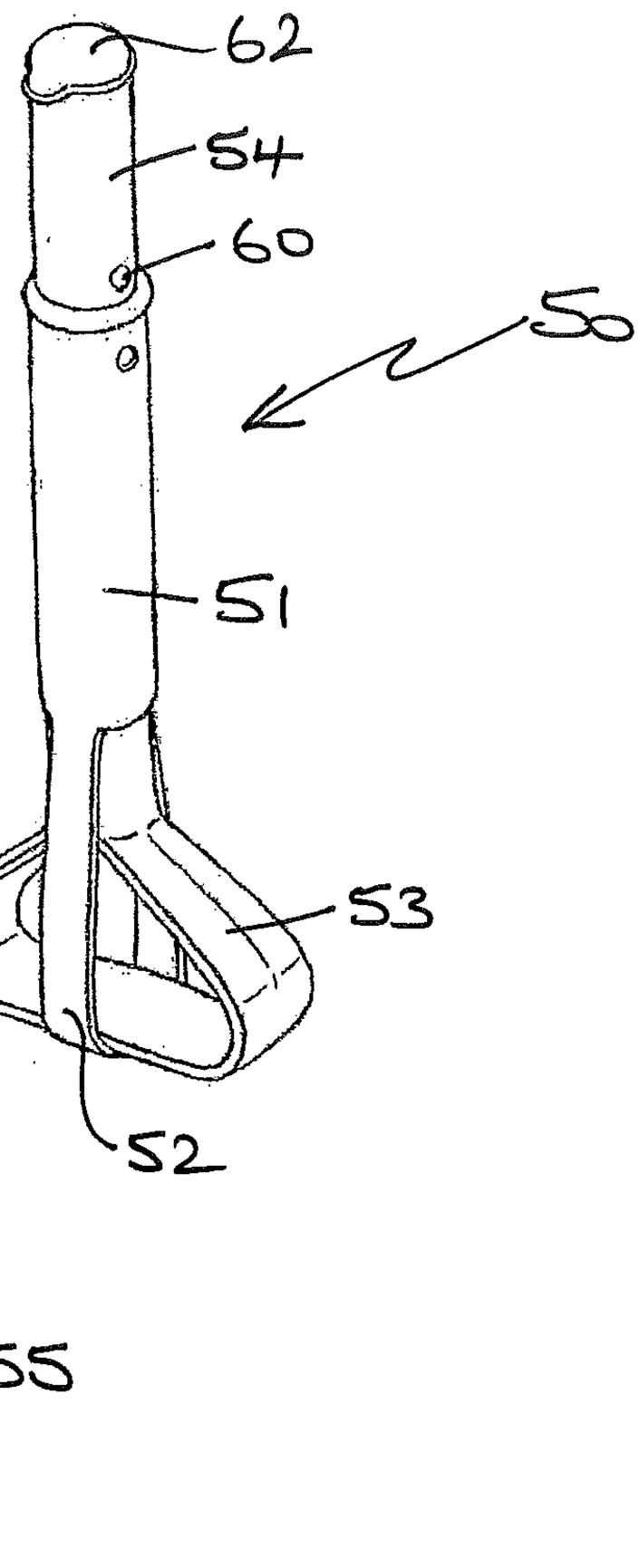


FIG 6



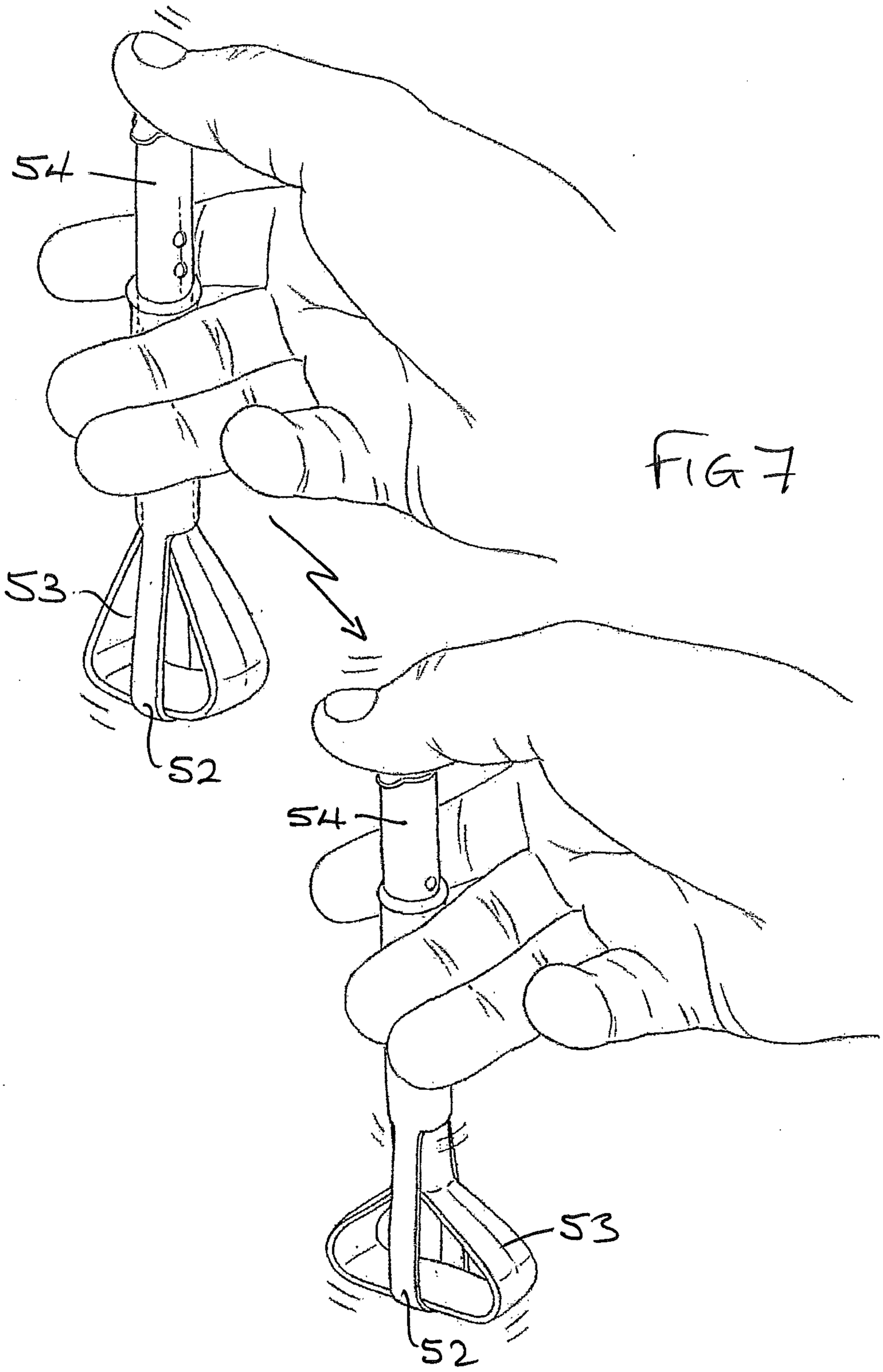


FIG 7

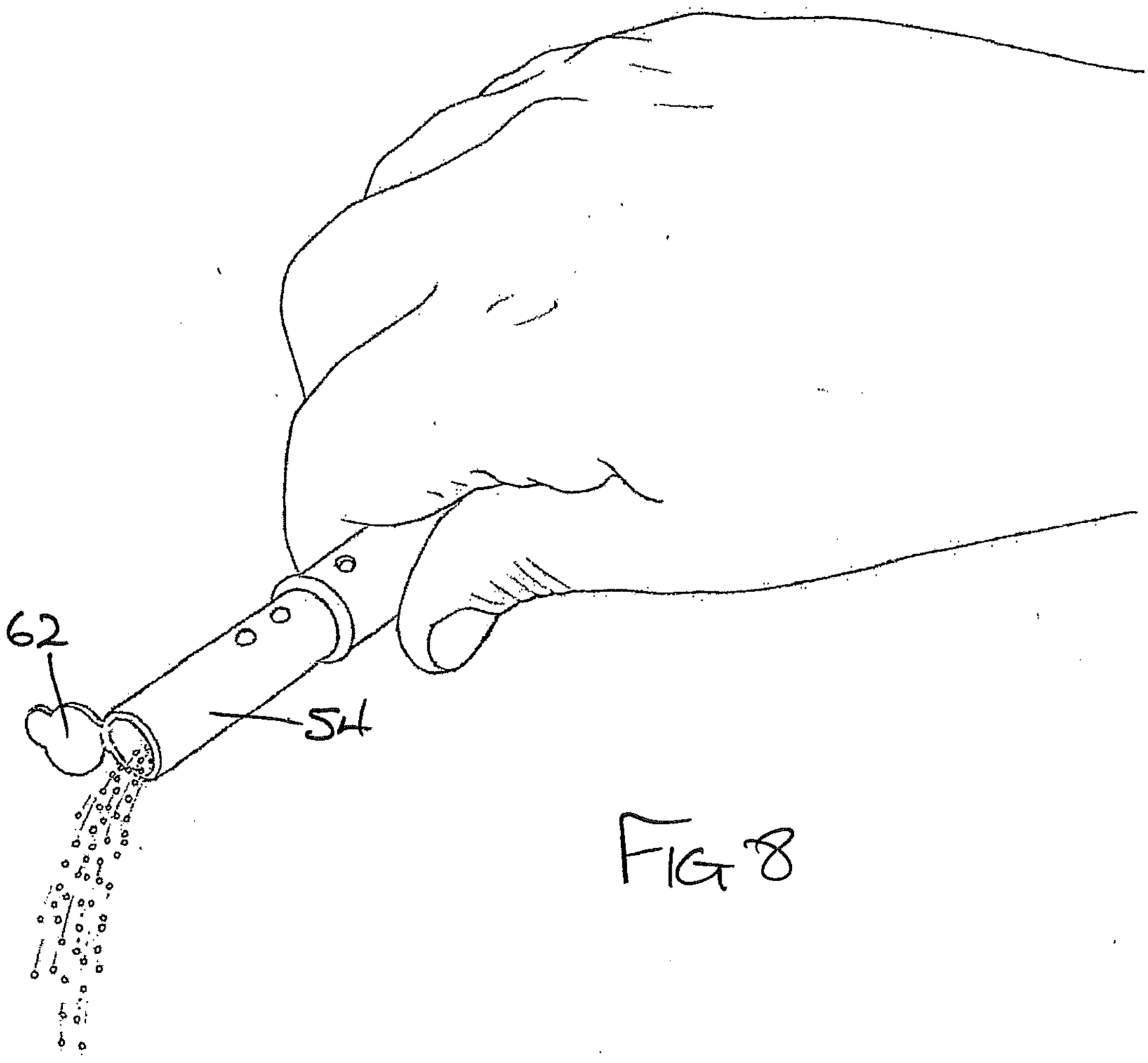
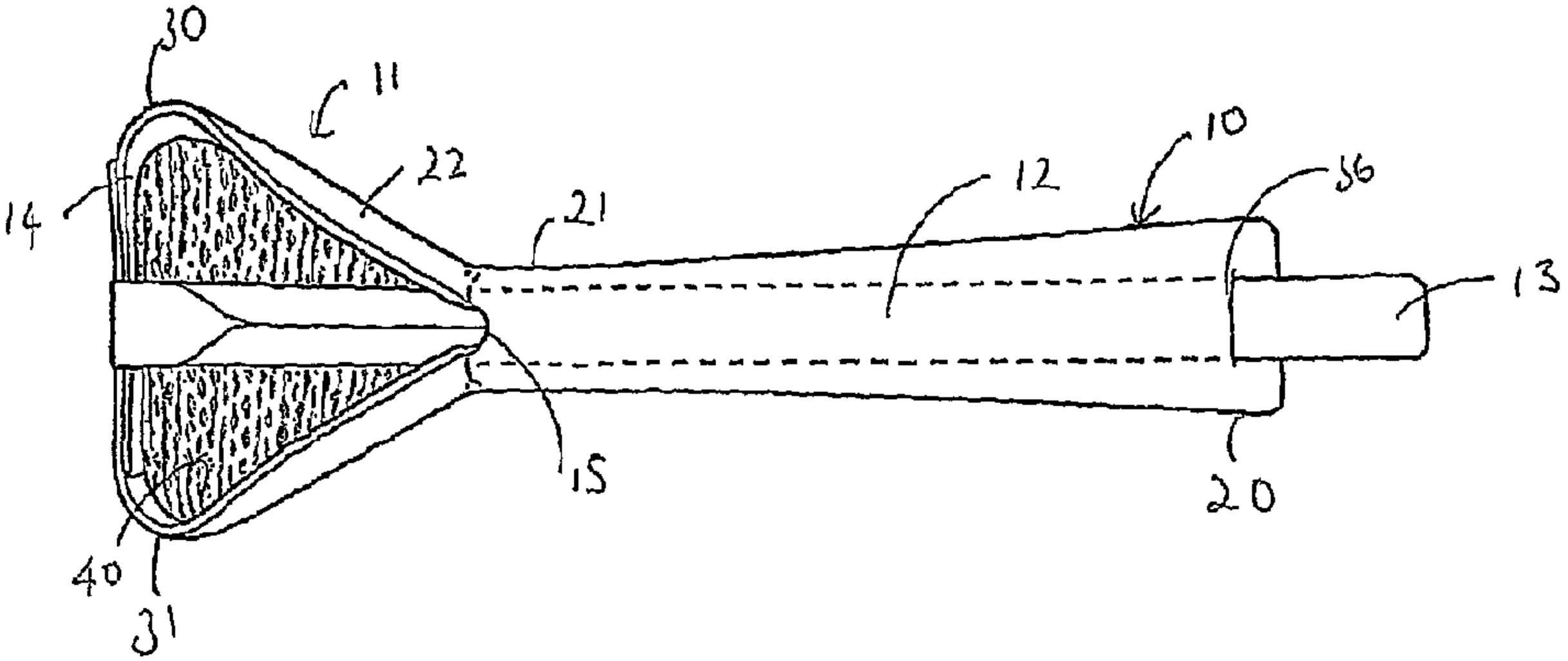


FIG 8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