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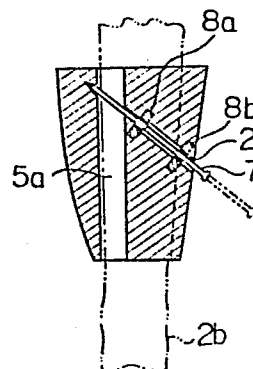
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54 **Necktie assembly.**

57 A necktie assembly easily fittable and removable to a wearer's neck without tying or untying a knot thereof, which comprises a tie body having a shape similar to a traditional tie and a knot formed by tying a part of the tie body around a core body (3). The core body has a channel (5a) by which a free end (2b) of the tie body can be inserted into the knot while keeping a neatly folded shape thereof. The necktie assembly may have a pin (7) or the like built-in the core body for securing the necktie.

Fig. 8



NECKTIE ASSEMBLY

Field of the Invention

The present invention relates to a necktie assembly which need not be knotted when fitted to the neck and which can easily detached.

5 Description of the Prior Art

In the past, numerous proposals have been made for neckties which can be detached while knotted, thus eliminating the troublesome knotting operation. These neckties, however, have had strange appearances compared
10 to traditional ties or have been easily damaged in a short period of use due to their complicated structures.

Japanese Examined Utility Model Publication (Kokoku) No. 40-21052, for example, discloses a necktie comprising a wide front band, part of which forms a knot, and a
15 string inserted through the knot to form a loop for fitting to a wearer's neck. This tie, however, has the drawbacks of easy deformation of the knot formed of the wide band and the strange appearance caused by the large difference between the width of the string and the band
20 when the string happens to appear from under the collar of a wearer's shirt.

Japanese Examined Utility Model Publication (Kokoku) No. 53-15444 discloses a triangular core body inserted into a knot of a tie body for maintaining the knot shape
25 and for allowing easy sliding of a narrow band of the tie body through the knot when the tie is fitted to or removed from the neck. However, the necktie still tends to deform due to distortion of the narrow band or displacement of a folded line thereof after repeated
30 use.

SUMMARY OF THE INVENTION

It is an object of the present invention to reduce or eliminate the above-mentioned problems of the prior art.

It is another object of the present invention to
35 provide a necktie assembly having a core body within a

knot for maintaining an elegant knot shape and for enhancing the sliding of a narrow band through the knot.

The above objects can be achieved by a necktie assembly comprising a tie body consisting of a wide and
5 a narrow bands longitudinally connected to each other and a core body, a knot being formed by tying the tie body around the core body and a loop being formed by slidably inserting a free end of the narrow band into a channel provided through the core body, the necktie
10 assembly being characterized in that the channel of the core body is of a U-shaped cross section to allow the free end of the narrow band being inserted while keeping a double folded state.

BRIEF DESCRIPTION OF THE DRAWINGS

15 The present invention will be described more fully with reference to the accompanying drawings; in which

Fig. 1 is a front view showing use of the necktie assembly;

Fig. 2 is a back view of a main part of the necktie
20 assembly;

Fig. 3 is a front view of an example of a tie body suitable for the present invention;

Fig. 4 is a sectional view of the necktie assembly along the longitudinal center line thereof;

25 Fig. 5 is a perspective view of an embodiment of a core body utilized for the present invention;

Fig. 6 is a back view of the same embodiment as shown in Fig. 5;

Fig. 7 is a perspective view of another embodiment
30 of the core body utilized for the present invention;

Fig. 8 is a sectional view of the core body showing a securing means;

Fig. 9 is a side view of a pin utilized for the securing means shown in Fig. 8;

35 Fig. 10 is a sectional view of the narrow band showing an interlining;

Figs. 11 through 13 are perspective views of

different embodiments of interlinings suitable for the present invention;

Fig. 14 is a sectional view of the process of making a narrow band comprising the interlining shown in
5 Fig. 13;

Fig. 15 is a sectional view of the completed narrow band shown in Fig. 14;

Fig. 16 is an exploded perspective view of another securing means suitable for the present invention;

10 Fig. 17 is a sectional view of the securing means shown in Fig. 16; and

Fig. 18 is a development of part of the guide cylinder illustrating the grooves and the ribs thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 Figures 1 and 2 illustrate appearances of a necktie assembly 1 according to the present invention. The necktie assembly 1 is mainly formed of a tie body 2 made from an outer cloth of natural fibers or synthetic fibers and interlinings wrapped in the outer cloth. The
20 tie body 2 has two portions, a wide band 2a and a narrow band 2b, longitudinally connected to each other to form a linear piece. The tie body 2 also has a knot 4 near the border between the wide and narrow bands 2a and 2b.

As shown in Fig. 1, the knot 4 is formed by tying a
25 middle portion of the tie body 2 around a core body 3 so that the core body 3 is wrapped within the knot 4 and a free end of the wide band 2a is hung down from the knot 4. A free end of the narrow band 2b is inserted into the knot so as to pass through a channel 5 provided
30 through the core body. Therefore the knot 4 is provided with an adjacent loop 20 of the narrow band 2b which serves for encircling a wearer's neck. The loop 20 can be adjusted in size by adjusting the length of the free end portion of the narrow band 2b extending from the
35 knot 4 and, thereby, can be detached from or fitted on the neck. The loop 20 may have a detachable fastener 21, such as a clasp or a snap hook, for easier attachment or

detachment.

The tie body may be of the usual form of a traditional tie, however, it preferably has a stepped form as shown in Fig. 3, in which the narrow band 2b and the wide band 2a are obliquely connected to each other with a width difference at the connected end. This form is convenient for forming an elegant knot. This is because the narrow band 2b forming the knot 4 has to run obliquely in the rear side of the knot as shown by an arrow X in Fig. 2, causing lengths L and M of either edge of the narrow band 2b, the difference of which can be compensated by the oblique connection of the bands 2a and 2b, and, as a result, a symmetrical front view of the tie being obtained.

Further, near to the connected end, the bands 2a and 2b preferably have certain lengths 2c and 2d, respectively, in which harder interlinings are additionally wrapped in. Positions and sizes thereof are selected so that the most conspicuous part of the tie around the knot can be formed therewith for maintaining the shape thereof constant even after the repeated use.

The core body 3 utilized for forming the knot 4 can be made of any material having a suitable rigidity, for example, wood or plastic. As shown in Fig. 5, the shape of the core body 3 is substantially an inverse triangle in the front view. A front wall 3a thereof is of a converged conical surface, while a rear wall 3b thereof is of a flat surface. Top and bottom surfaces 3c and 3d are flat and parallel to each other. The rigidity of the core body 3 maintains the shape of the knot 4 formed by a method described later.

To ensure a good appearance when fitted, it is important that a portion of the narrow band 2b slidably inserted to the knot 4 be evenly folded along a length thereof. Conventional core bodies did not take this point into consideration, and, thus, the narrow band

tended to twist or reverse during repeated loosening and tightening operation. According to the present invention, the core body 3 has the channel 5 bored from the top surface 3c and the bottom surface 3d for neatly
5 inserting the narrow band 2b, as shown in Figs. 5 and 6. The channel 5 has an inlet 51 on a left-sided portion of the top surface 3c in the front view and an outlet 52 on a middle portion of the bottom surface 3d. The rear side of the channel 5 is open. The depth of the channel
10 5 is larger than the width thereof so that the narrow band 2b can be slide therethrough keeping the double folded shape along the inner wall of the channel 5. The curvature of the channel between the inlet 51 and the outlet 52 imparts a suitable resistance to the movement
15 of the narrow band 2b and keeps it in the fixed state.

In Fig. 7, another embodiment of the core body 3 is illustrated, which is fabricated with a main piece 30 and a back plate 31. The main piece 30 is substantially of the same shape as the first embodiment shown in
20 Fig. 5. The back plate 31 is fittable to the rear wall of the main piece 30 in such a manner that a curved rib 5b provided on a surface of the back plate 31 is engaged into a channel of the main piece, thereby a channel 5a having a U-shaped cross section is formed
25 therebetween. The rib 5b serves as a guide for neatly folding a narrow band 2b.

The knot 4 is preferably formed by the following steps:

1. Inserting a free end of the narrow
30 band 2b into the channel 5 of the core body 3 under a double folded state, and in the case of the embodiment shown in Fig. 7, attaching the back plate 31 to the main body 30,
2. Tying a knot around the core body 3 with
35 a middle portion of the tie body 2 in the same manner as tying a traditional necktie, and
3. Fixing the knot by sewing the layers of

the tie body to each other or by adhering it to the core body 3.

The tie assembly according to the present invention may have a means for securing the narrow band 2b in the core body 3. Figure 8 shows an embodiment of a means in which two nuts 8a and 8b are separately embedded as a holder in the core body 3 midway of a hole 21 bored from the rear surface 3b to the inner wall of the channel 5a. A pin 7 with a threaded portion 7a and a tip portion 7b is inserted along the hole 21.

The pin 7 is kept in the hole 21 by engagement of the threaded portion 7a with the outer nut 8b. A rear end of the pin 7 protrudes backward from the hole 21 and further from the knot 4 through a space between the layers of the tie body 2 forming the knot 4. In this position, the tip portion 7b of the pin 7 hides in the hole 21. When the tie is fitted to the wearer's neck, the pin 7 is moved forward by screwing and, after disengagement with the outer nut 8b, is pushed toward the channel 5 so that the tip portion 7b pierces the narrow band 2b in the channel 5a. The pin 7 is further screwed with the inner nut 8a to maintain the operative position thereof.

In Figs. 16 through 18 illustrate another embodiment of the securing means 60. As shown in Fig. 16, the securing means 60 consists of a push rod 61, a rotor 62, a pin 63, a spring 64 and a guide cylinder 65 in which the three parts 61, 62 and 63 are movably built-in as shown in Fig. 17. The push rod 61 has a gear shaped portion 61a with six teeth 61b in a circumference thereof. Each of the teeth 61b slidably engages to each of grooves 65a provided longitudinally in an upper half of an inner wall of the guide cylinder 65. Each projection between the two adjacent grooves 65a constitutes each of six ribs 65b having a tapered lower end 65c. The grooves 65a are so arranged that the deeper one 65'a and the shallower one 65"a are alter-

nately disposed. The rotor 62 abuts the gear-shaped portion 61a of the push rod 61 with frictional contact. The rotor 62 has three teeth 62a equidistantly arranged in the circumference thereof. The teeth 62a can be
5 engageable only to the deeper groove 65a but not to the shallower one due to their size. Further, each of the teeth 62a has a knife edge-like top engageable to the tapered end 62c. The pin 63 is fixed to a center hole of the rotor 62. The spring 64 is located between the
10 rotor 62 and the bottom wall of the cylinder 65 so that the rotor 62 and the push rod 61 are upwardly biased.

The cylinder 65 is embedded in the core body 3 in the same manner as the nuts 8a and 8b of the first embodiment.

15 In a non-operative condition, the teeth 62a of the rotor 62 are engaged to the deeper grooves 65'a. Accordingly, the rotor 62 is pushed up to the utmost position of the groove 65'a and the pin 63 retreats in the cylinder 65.

20 When the rear end of the push rod 61 projected from the cylinder 65 is pushed down against the upward force of the spring 64, the rotor 62 also moves downward along the deeper grooves 65'a and finally disengages therefrom. Due to this motion, the pin 63 protrudes from the
25 cylinder 65 and secures the narrow band 2b in the channel 5a.

When the pushing action to the push rod 61 is released, the rotor 62 and the pin 63 tend to return to the original position due to the spring force. The
30 knife edge-like top end 62c is forced to contact the tapered end 65c of the rib 65b and, as a result, a torque is exerted on the teeth 62a. Due to this torque, the rotor 62 rotates in a 60 degrees arc corresponding to an angle of one of the grooves 65a.

35 Thereby, the returning motion of the rotor 62 is blocked by the shallower groove 65"a and the operative position of the pin 63 is maintained.

Another push of the push rod effects the same action on the rotor as described above and the teeth 62a is engageable again to the deeper grooves 65'a, thereby the pin 63 can return to the non-operative position.

5 Instead of the pin, a presser with a frictional head may be utilized for exerting suitable braking force on the narrow band 2b.

10 The present invention can be applied to a tie body 2 having a conventional interlining structure as shown in Fig. 10, in which a plain interlining 10 is wrapped by an outer cloth 15, both edges 16 of which are sewn together with the lining 10 along the center line of the back side of tie body 2. However, to enhance the effect of the channel 5a for folding the narrow band 2b, 15 a certain length of the narrow band 2b which has to slide through the channel 5a when fitting and removing of the tie preferably has an improved interlining. Figs. 11 through 13 illustrate various types of the interlinings suitable for achieving the abovesaid 20 purpose.

 The interlining 11 shown in Fig. 11 has a groove 11a along the longitudinal center line thereof, enabling the band 2b to be easily folded.

25 The lining 12 shown in Fig. 12 has a plurality of long apertures 12b linearly arranged along the center line of the lining, each two adjacent apertures 12b being separated by a short bridge 12a. The lining 12 is also easily foldable along the aperture 12b.

30 Figure 13 illustrates a lining 13 which is completely divided into two parts 13a and 13b in the shape of narrow tapes.

 The linings 11, 12 and 13 may be prepared separately from an ordinary lining utilized in other portion of the tie body, however, it is convenient to be formed as a 35 part of the ordinary lining, in which part the groove or aperture is provided.

 These linings can be sewn with the outer cloth in

the same manner as described with reference to Fig. 10. The following process, explained with reference to Fig. 14, however, is preferable to make the band 2b, particularly with the interlining 13.

- 5 1. Folding an outer cloth 17 in such a manner that an inner surface thereof is exposed, and sewing the edges thereof together to form a tube thereof,
2. Arranging the tapes 13a and 13b along the both side of the stitch line of the cloth 17 and doubling out
10 each of the edges to wrap the tapes 13a and 13b,
3. Sewing or adhering the edges of the tapes 13a and 13b with the doubled out portions of the outer cloth 17, and
4. Turning the tube of the outer cloth 17 inside
15 out so that the tapes 13a and 13b are inside and the proper surface of the outer cloth 17 is outside as shown in Fig. 15.

In this process, a backing cloth 18 may be applied on the lining 13 for reinforcement.

- 20 As being described above, since the main parts of the necktie assembly is made from conventional cloth of the same shape as utilized for a traditional necktie, the appearance and feel thereof are familiar to the wearer. Therefore, the necktie assembly will be
25 welcomed, without reservation, by many consumers.

Further, since the knot is formed on a relatively rigid core body, its shape can be maintained without deformation even after repeated use. This feature can also be enhanced by the use of a harder lining in
30 selected portions of the tie body.

Due to a well-constructed channel of the core body and a double foldable interlining, the narrow band is smoothly slidable through the knot while keeping the neatly folded shape thereof, which results in a constant
35 elegant style of the necktie.

Moreover, when utilizing a securing means, the loop of the narrow band is fixed in size, and slippage

between the knot and the narrow band can be suppressed,
enabling a comfortable fit around the neck. Contrary to
this, when one wishes to detach the tie, it can be
easily removed by disengaging the securing means from
5 the narrow band and enlarging the loop size. This
removing operation can be enhanced by provision of the
detachable fastener means midway of the loop.

CLAIMS

1. A necktie assembly comprising a tie body consisting of a wide and a narrow bands longitudinally connected to each other and a core body, a knot being formed by tying said tie body around said core body and
5 a loop being formed by slidably inserting a free end of said narrow band into a channel provided through said core body, said necktie assembly being characterized in that said channel of said core body is of a U-shaped cross section to allow said free end of said narrow band
10 being inserted while keeping a double folded state.

2. A necktie assembly according to claim 1, in which said narrow band and said wide band are obliquely connected to each other.

3. A necktie assembly according to claim 1 or 2
.15 in which said core body is provided with a means for securing said narrow band so as not to slide through said channel.

4. A necktie assembly according to claim 1 or 2, in which said loop has a detachable fastening means.

20 5. A necktie assembly according to claim 1 or 2, in which at least part of said narrow band comprises an interlining provided with a groove along the longitudinal center line of said interlining.

6. A necktie assembly according to claim 3, in
25 which said securing means is a combination of a movable body and a holder thereof built-in said core body.

7. A necktie assembly according to claim 6, in which said movable body is a pin which can penetrate through said narrow band in said channel.

30 8. A necktie assembly according to claim 6, in which said movable body is a presser which can be urged onto said narrow band in said channel.

9. A necktie assembly substantially as hereinbefore described with reference to any of the embodiments shown in the
35 accompanying drawings.

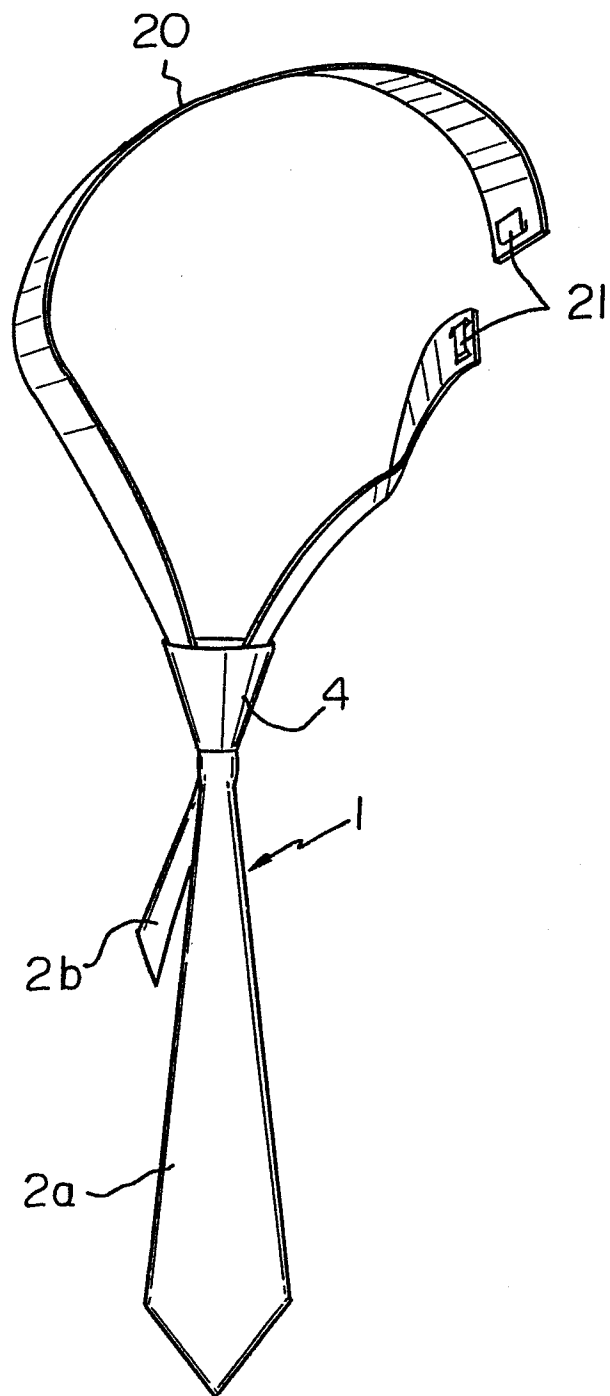
Fig. 1

Fig. 2

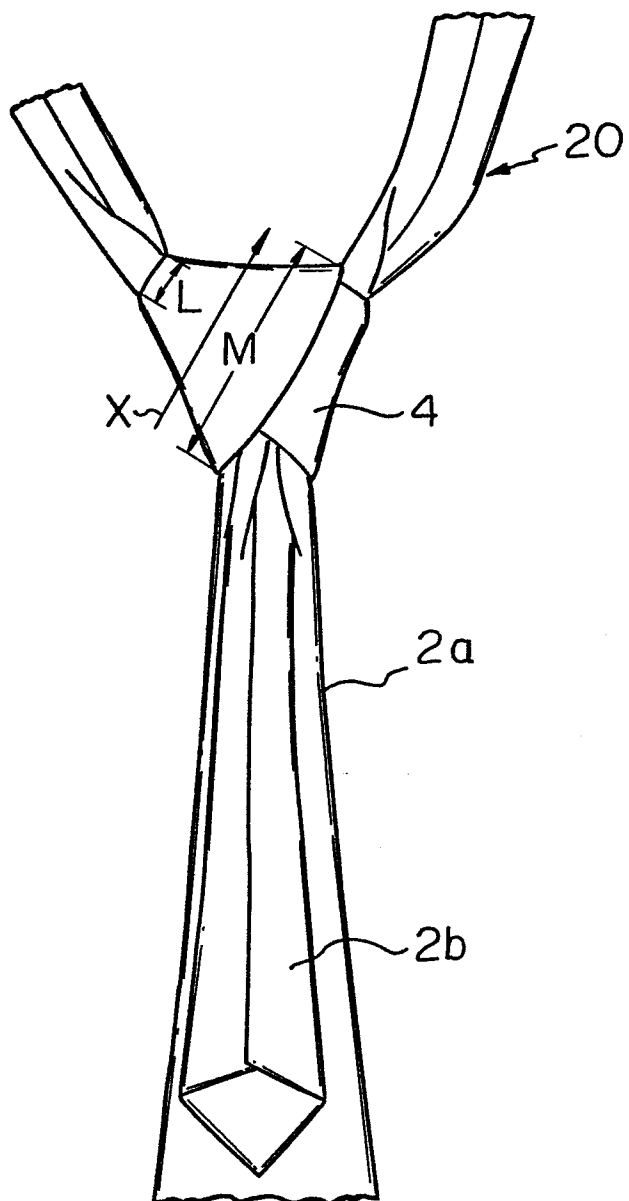


Fig. 3

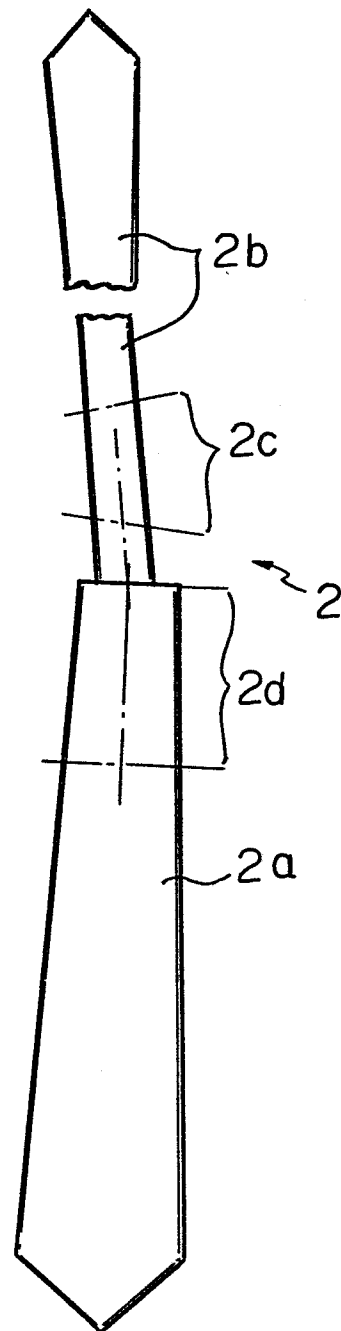


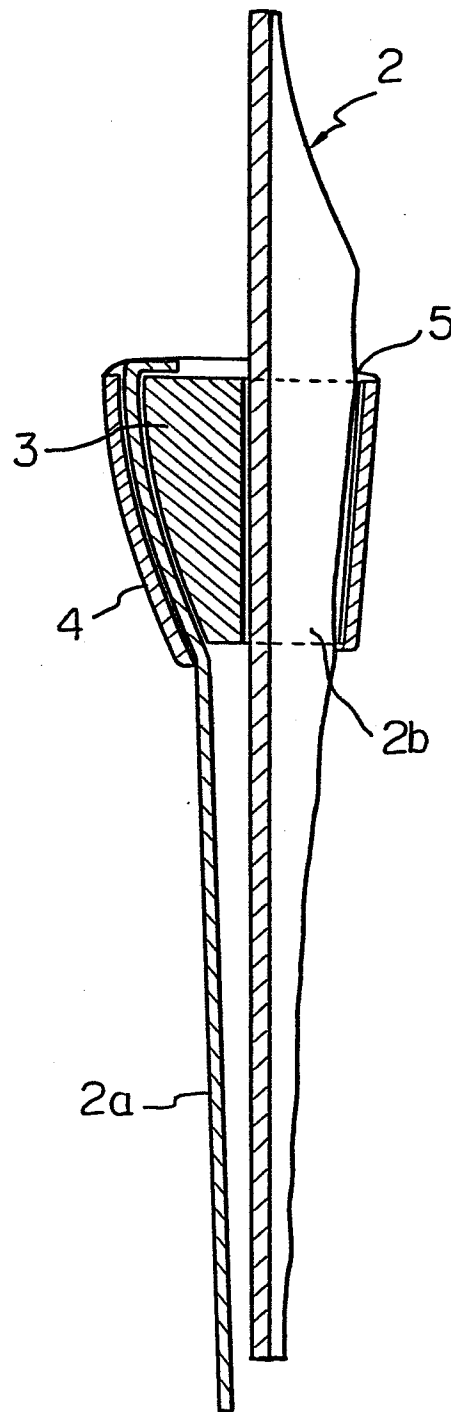
Fig. 4

Fig. 5

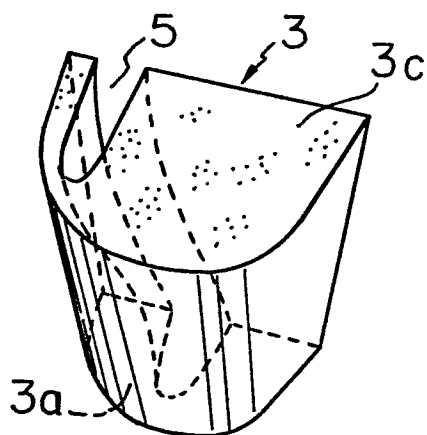


Fig. 6

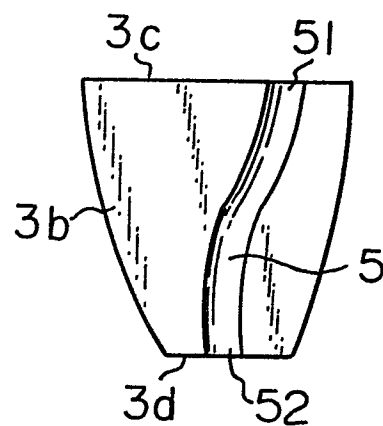


Fig. 7

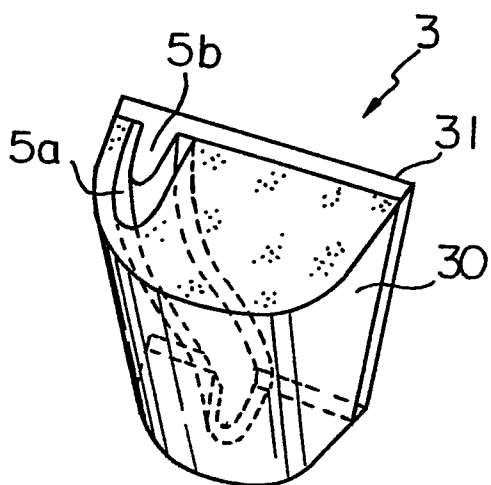


Fig. 8

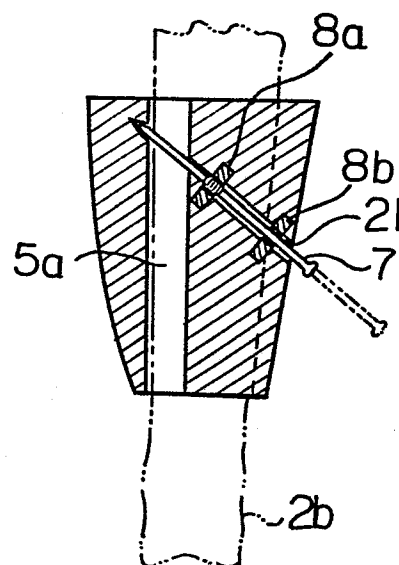


Fig. 9

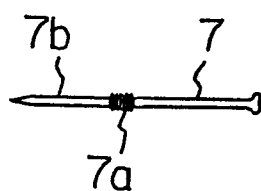


Fig. 10

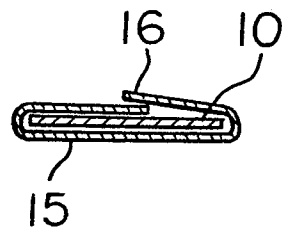


Fig. 11

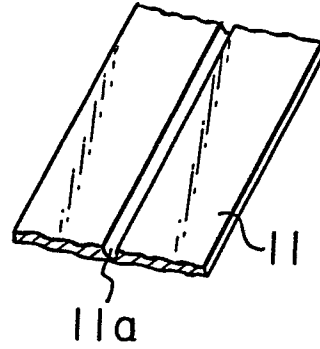


Fig. 12

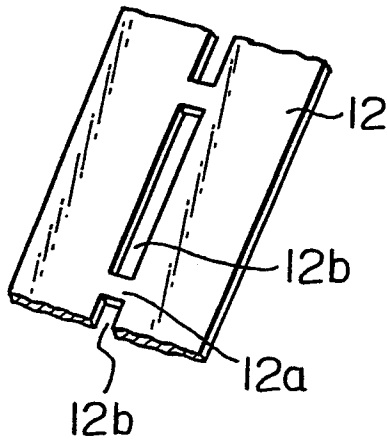


Fig. 13

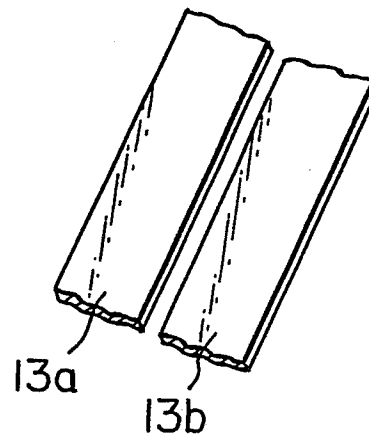


Fig. 14

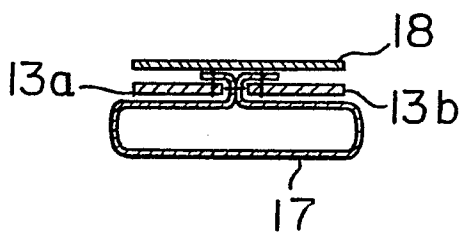


Fig. 15

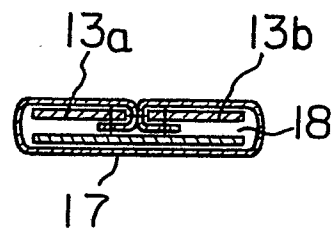


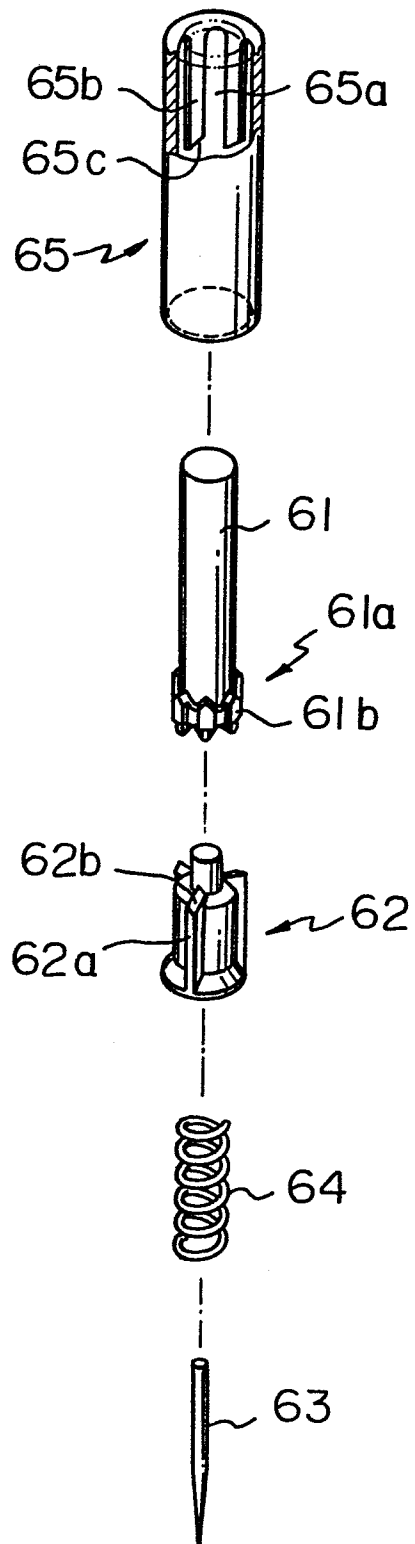
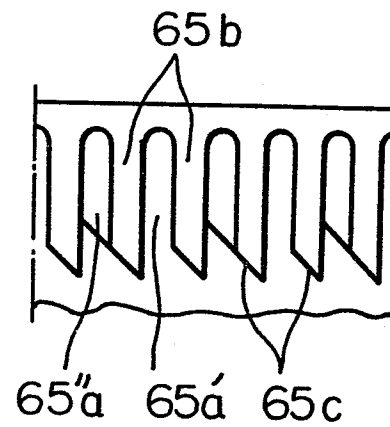
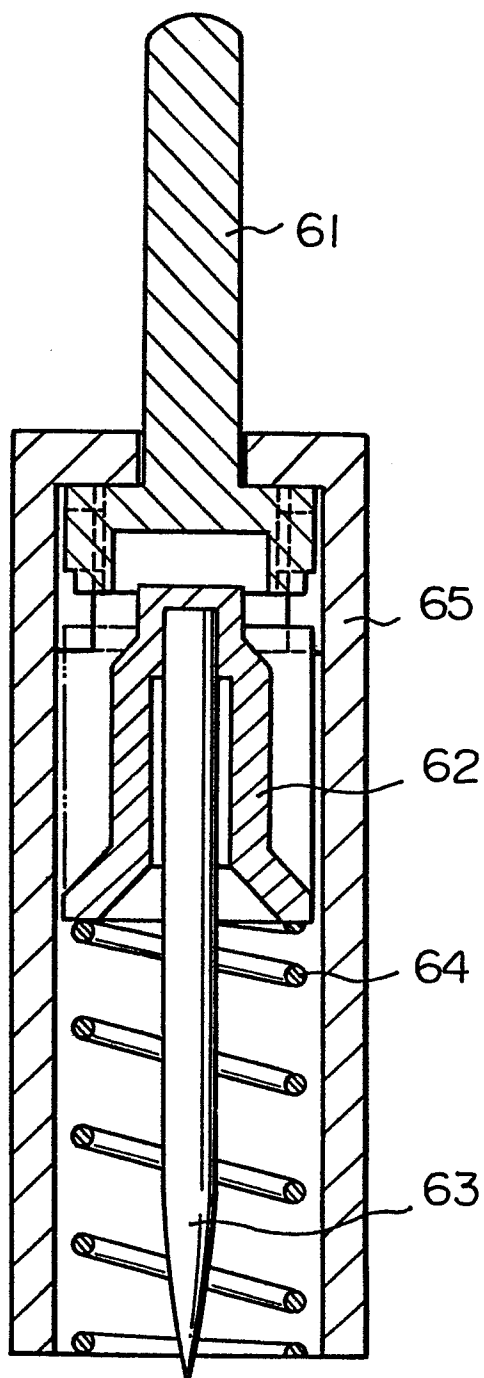
Fig. 16*Fig. 18*

Fig. 17



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
X	US-A-2 269 017 (M. GLADSTONE) * the whole document *	1, 3, 6, 8, 9	A 41 D 25/06 A 41 D 25/08 A 41 D 25/16
X	US-A-2 727 244 (K. KRISTJANSSON) * the whole document *	1, 3, 6, 8, 9	
A	US-A-1 451 355 (H.G. WREN) * the whole document *	1, 3, 6, 7, 8	
A	US-A-3 942 191 (C.C. HUNNICUTT) * claim; figures *	4	
A	US-A-3 872 513 (G.P. BEAUDIN) * claims; figures *	4	TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
A	US-A-2 432 994 (EXACTROL CORPORATION) * column 2, last paragraph; column 3, lines 1-58; column 4, lines 32-38; figures 1, 3, 9 *	5	A 41 D
A	US-A-2 370 670 (DIMPLE TIE CORPORATION) * page 2, column 1, lines 46-75; column 2; page 3; page 4, column 1; column 2, lines 1-12; figures *	5	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 07-01-1984	Examiner GARNIER F.M.A.C.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 7)
A	US-A-1 885 956 (I. SIMSON) * page 1, lines 50-90; figures *	5	
A	--- US-A-2 269 577 (M.M. BROHARD) * page 1, column 2, lines 4-55; figures * -----	5	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 07-01-1984	Examiner GARNIER F.M.A.C.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	