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(54) **Stretchable shoes**

(57) Stretchable shoes capable of being fixed without causing any stretch of the shoes once adjustment of a size thereof depending on a wearer is completed. Velcro-type fasteners are arranged on a heel, so that a size of the shoes may be kept fixed once adjustment of

the size is carried out, because engagement between the fasteners exhibits rigidity to a degree sufficient to substantially prevent release of the engagement. Also, the stretchable shoes permit adjustment of a size of the shoes to be readily accomplished by merely loosening a single countersunk screw kept tightened.

FIG.3

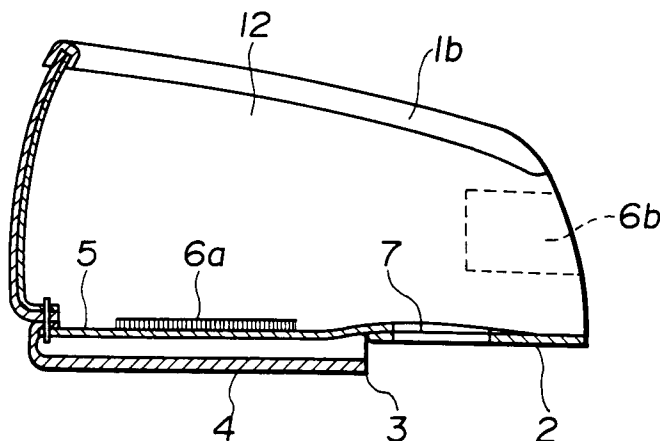
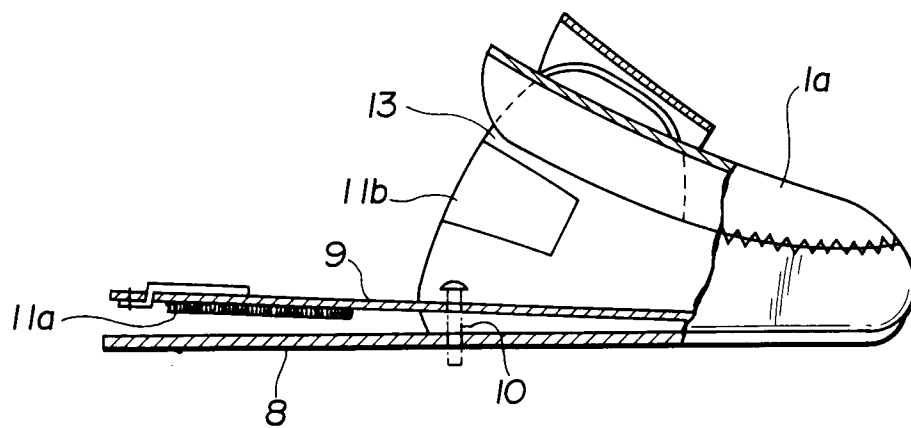


FIG.5



Description

This invention relates to stretchable shoes, and more particularly to shoes which are adapted to stretch or contract so as to conform to a size of feet of infants, children or the like and vary in size depending on growth of infants and children.

Stretchable shoes have been conventionally known in the art. The conventional stretchable shoes are made of leather. The leather stretchable shoes are required to exhibit increased strength, resulting in a structure of the shoes being complicated and manufacturing of the shoes taking much time and labor. Also, the conventional stretchable shoes require components therefor to exhibit sufficient strength, so that selection of material for the components may be substantially subject to restriction. Thus, the conventional stretchable shoes are caused to be increased in manufacturing cost. A reduction in cost leads to a deterioration in stretchability of the shoes.

The present invention has been made in view of the foregoing disadvantage of the prior art.

Accordingly, it is an object of the present invention to provide stretchable shoes which are capable of being highly simplified in structure to a degree sufficient to accomplish time and labor savings in the manufacturing.

It is another object of the present invention to provide stretchable shoes which are capable of permitting a material therefor to be substantially unrestrictedly selected.

It is a further object of the present invention to provide stretchable shoes which are capable of being reduced in manufacturing cost.

It is still another object of the present invention to provide stretchable shoes which are comfortable to wear.

It is yet another object of the present invention to provide stretchable shoes which are capable of being fixed without causing any stretch of the shoes once adjustment of a size thereof depending on a wearer is completed.

In accordance with the present invention, stretchable shoes are provided. The stretchable shoes include a shoe body divided into a front section and a rear section. The front section includes a front sole and a front inner sole each of which is formed so as to rearwardly extend by a predetermined length in a tongue-like manner and the rear section includes a rear sole which is provided on a lower surface thereof with a heel having a front edge. The rear sole of the rear section is provided on a portion of an upper surface thereof corresponding to the heel with a first velcro-type fastener and formed with an elongate guide hole elongatedly extending in a longitudinal direction thereof. The front sole of the front section is inserted at a rear portion thereof through the front edge of the heel into an inside of the heel and mounted thereon with a pin so as to vertically extend therefrom. The pin is fitted in the elongate guide hole of

the rear sole of the rear section to join the rear section and front section to each other, resulting in providing the shoe body. The front inner sole has a second velcro-type fastener mounted on a lower surface of a rear end thereof, which second velcro-type fastener is detachably engaged with the first velcro-type fastener mounted on the upper surface of the rear sole of the rear section to unite the front section and rear section to each other.

In a preferred embodiment of the present invention, the rear section of the shoe body is detachably provided on each of both outer side surfaces of a front end thereof with a third velcro-type fastener and the front section of the shoe body is detachably provided on each of both inner side surfaces of a rear end thereof with a fourth velcro-type fastener, wherein the third velcro-type fasteners and fourth velcro-type fasteners are detachably engaged with each other.

In a preferred embodiment of the present invention, the heel of the rear sole of the rear section is mounted thereon with a non-slip rubber member.

Also, in accordance with the present invention, stretchable shoes are provided. The stretchable shoes include a shoe body divided into a front section and a rear section. The front section includes a front sole which is formed so as to rearwardly extend by a predetermined length and provided at a rear end thereof with two plug-in connectors and a front inner sole formed so as to rearwardly extend by a predetermined length. The rear section includes a rear sole formed with an elongate hole and a heel which is formed on an upper surface thereof with a guide recess for fitting a rear end of the front sole therein and tightening recesses for fitting the plug-in connectors therein. The tightening recesses are arranged at a rear end of the guide recess in a manner to be contiguous to the guide recess. The front sole of the front section is formed with a fit hole. The stretchable shoes also include an interposed member formed therein with a threaded hole and securely fitted in the fit hole of the front sole. The front inner sole of the front section is formed with a hole in a manner to correspond to the threaded hole of the interposed member of the front sole. The front sole of the front section is inserted at a rear end thereof into the guide recess and tightening recesses of the heel of the rear section and the front inner sole of the front section is inserted into an upper side of the rear sole while interposing the rear sole of the rear section therebetween. The stretchable shoes further include a countersunk screw inserted through the hole of the front inner sole and the elongate hole of the rear sole and securely threadedly fitted in the threaded hole of the interposed member of the front sole to unite the front section and rear section to each other.

In a preferred embodiment of the present invention, the front inner sole of the front section of the shoe body is provided on a lower surface thereof with a first velcro-type fastener and correspondingly the rear sole of the rear section of the shoe body is provided on an upper surface thereof with a second velcro-type fastener so as

to be detachably engaged with the first fastener.

Further, in accordance with the present invention, stretchable shoes are provided. The stretchable shoes include a shoe body divided into a front section and a rear section. The front section includes a front sole which is formed so as to rearwardly extend in a tongue-like manner and provided at a rear end thereof with two plug-in connectors. The rear section includes a rear sole and a heel. The heel is formed on an upper surface thereof with a guide recess for fitting a rear end of the front sole therein and tightening recesses for fitting the plug-in connectors therein and provided at a portion thereof extending over the guide groove and tightening grooves with a recessed space. The stretchable shoes also include an interposed member received in the recessed space and provided on a central portion of an upper surface thereof with a projection. The projection is formed into a predetermined height and formed therein with a threaded hole so as to vertically extend in an axial direction thereof for threadedly fitting a countersunk screw therein. The interposed member is formed on each of portions of the upper surface thereof between which the projection is interposed with an engagement pressedly engaged with each of the plug-in connectors of the front sole of the front section of the shoe body. The rear sole of the rear section is formed at a portion thereof abutted against a top surface of the projection with a small hole. The countersunk screw is threadedly inserted through the small hole of the rear sole into the threaded hole of the interposed member.

The invention may be carried into practice in various ways and some embodiments will now be described by way of example with reference to the accompanying drawings, in which:-

FIGURE 1 is a side elevation view generally showing a first embodiment of stretchable shoes according to the present invention;

FIGURE 2 is a side elevation view partly in section of the stretchable shoes shown in FIGURE 1;

FIGURE 3 is a vertical sectional side elevation view showing a rear section of the stretchable shoes of FIGURE 1;

FIGURE 4 is a plan view of the rear section of the stretchable shoes shown in FIGURE 3;

FIGURE 5 is a partially cutaway side elevation view in section showing a front section of the stretchable shoes of FIGURE 1;

FIGURE 6 is an expanded plan view of the front section of the stretchable shoes shown in FIGURE 5 wherein velcro-type fasteners arranged on both sides thereof are outwardly expanded;

FIGURE 7 is a partially cutaway bottom view showing a velcro-type fastener arranged on a front inner sole of the front half of the stretchable shoes of FIGURE 6;

FIGURE 8 is a fragmentary vertical sectional side elevation view showing a heel of a rear half of the

stretchable shoes of FIGURE 1 which is provided thereon with a non-slip rubber sole;

FIGURE 9 is a fragmentary side elevation view partly in section showing a rear portion of a second embodiment of stretchable shoes according to the present invention;

FIGURE 10 is a fragmentary partially cutaway vertical sectional side elevation view of the rear section of the stretchable shoes shown in FIGURE 9;

FIGURE 11 is a plan view showing a plan view showing a sole element of the front section of the stretchable shoes shown in FIGURE 10;

FIGURE 12 is a sectional view showing a rear section of the stretchable shoes of FIGURE 10;

FIGURE 13 is a plan view showing a heel element of the rear section of the stretchable shoes of FIGURE 10;

FIGURE 14 is a fragmentary partially cutaway side elevation view partly in section showing a rear section of a third embodiment of stretchable shoes according to the present invention;

FIGURE 15 is a partially cutaway rear elevation view partly in section showing an essential part of the rear section of the stretchable shoes shown in FIGURE 14;

FIGURE 16 is a fragmentary side elevation view partly in section showing an essential part of a front section of the stretchable shoes of FIGURE 14;

FIGURE 17 is a fragmentary schematic plan view showing a front sole element of the front section of the stretchable shoes shown in FIGURE 16;

FIGURE 18 is a fragmentary partially cutaway side elevation view partly in section showing a rear section of the stretchable shoes of FIGURE 14;

FIGURE 19 is a plan view showing a heel which is incorporated in the rear section of the stretchable shoes shown in FIGURE 18; and

FIGURE 20 is a perspective view showing an interposed member incorporated in the heel of the rear section of the stretchable shoes shown in FIGURE 19.

Referring first to FIGURES 1 to 8, a first embodiment of stretchable shoes according to the present invention is illustrated. Stretchable shoes of the first embodiment include a shoe body 1 divided into a front section 1a and a rear section 1b. The rear section 1b includes a rear sole 2 which is provided on a lower surface thereof with a heel 4 having a front edge 3. Also, the rear sole 2 has a rear member 5 adhesively mounted on an upper surface thereof in a manner to positionally correspond to the heel 4. The rear member 5 is provided thereon with a first velcro-type fastener 6a. The rear member 5 and rear sole 2 are formed at a center of a portion thereof superposed on each other with a common elongate guide hole 7 vertically extending there-through and elongatedly extending in a longitudinal direction thereof. The front section 1a includes a front sole

8 and a front inner sole 9 each of which is formed so as to rearwardly extend by a predetermined length in a tongue-like manner. The front sole 8 is inserted at a rear portion thereof through the front edge 3 of the heel 4 into an inside of the heel 4. The front sole 8 is mounted thereon with a pin 10 so as to vertically extend therefrom, which pin is then fitted into the guide through-hole 7 of the rear section 1b to join the rear section 1b and front section 1a to each other, resulting in providing the shoe body 1. The front inner sole 9 has a second velcro-type fastener 11a adhesively mounted on a lower surface of a rear end thereof. The second velcro-type fastener 11a is detachably engaged with the first velcro-type fastener 6a mounted on the upper surface of the rear member 5 of the rear sole 2 to unite the front section 1a and rear section 1b to each other. The rear sole 2 and rear member 5 may be made of the same material.

Also, the rear section 1b of the shoe body 1 is provided on each of both outer side surfaces 12 of a front end thereof with a third velcro-type fastener 6b in a detachable manner and the front section 1a of the shoe body 1 is detachably provided on each of both inner side surfaces 13 of a rear end thereof with a fourth velcro-type fasteners 11b. Thus, the second velcro-type fastener 11a provided on the lower surface of the rear end of the front inner sole 9 is releasably or detachably engaged with the first velcro-type fastener 6a provided on the upper surface of the rear member of the rear section 1b as described above and the third velcro-type fasteners 6b on the outer side surfaces of the rear section 1b are detachably engaged with the fourth velcro-type fasteners 11b provided on the inner side surfaces of the front section 1a.

The heel 4 of the rear sole 2 of the rear section 1b may be mounted thereon with a non-slip rubber member 14 as shown in FIGURE 8. The mounting may be carried out by sewing or any other suitable means such as welding, adhesion or the like.

Referring now to FIGURES 9 to 13, a second embodiment of stretchable shoes according to the present invention is illustrated.

Stretchable shoes of the second embodiment include a shoe body 15 likewise divided into a front section 15a and a rear section 15b. The front section 15a includes a front sole 16 which is formed so as to rearwardly extend in a tongue-like manner. The front sole 16 is provided at a rear end thereof with two plug-in connectors 17 of a predetermined length in a manner to be laterally parallel to each other or spaced from each other at a predetermined interval. The front section 15a also includes a front inner sole 18 formed so as to rearwardly extend in a tongue-like manner.

The rear section 15b includes a heel 19 which may be made of rigid synthetic rubber. The heel 19 is formed on a front portion of an upper surface thereof with a guide recess or groove 20, which is formed into a depth substantially equal to a thickness of the front sole 16 so that the rear end of the front sole 16 may be fitted in the

guide recess 20. For this purpose, the heel 19 is also provided with a pair of tightening recesses 21 in a manner to be contiguous to the guide recess 20 and outwardly extend therefrom. The tightening recesses 21 are formed in conformity to the plug-in connectors 17 of the front sole 16, resulting in being adapted to receive the connectors 17 therein, respectively. Thus, the tightening recesses 21 are arranged at the rear end of the guide recess 20 in a manner to be contiguous to the guide recess 20.

The front section 15a also includes an interposed member 22, which is fixedly fitted in a fit hole 23 formed in the front sole 16. The interposed member 22 is formed therein with a threaded hole 24 so as to vertically extend in an axial direction thereof, in which a countersunk screw 25 is threadedly fitted. Likewise, the front inner sole 18 is formed with a hole 26 through which the screw 25 is inserted.

The rear section 15b includes a rear sole 27, which is formed at a predetermined position thereof with an elongate hole 28 through which the countersunk screw 25 is inserted. The rear sole 27 of the rear section 15b is connected at a rear end thereof to a lower end 29 of a rear wall of the rear section 15b in a manner to be integral therewith. Alternatively, the rear sole 27 and rear wall may be made of different materials, respectively, resulting in being joined to each other in a manner to wind on each other.

The second embodiment may be constructed in such a manner that the front inner sole 18 of the front section 15a of the shoe body 15 is provided on a lower surface thereof with a first velcro-type fastener 30a and correspondingly the rear sole 27 of the rear section 15b of the shoe body 15 is provided on an upper surface thereof with a second velcro-type fastener 30b so as to be detachably engaged with the first fastener 30a.

Referring now to FIGURES 14 to 20, a third embodiment of stretchable shoes according to the present invention is illustrated. Stretchable shoes of the third embodiment include a shoe body 31 likewise divided into a front section 31a and a rear section 31b. The front section 31a of the shoe body 31 includes a front sole 32, which is formed so as to rearwardly extend in a tongue-like manner and has two plug-in connectors 33 formed at a rear end thereof into a predetermined length and in a manner to be spaced from each other in parallel at a predetermined interval as in the second embodiment described above.

The rear section 31b includes a heel 34, which may be made of rigid synthetic rubber. The heel 34 is provided on a front portion of an upper surface thereof with a guide recess 35. The guide recess 35 is formed into a depth substantially equal to a thickness of the front sole 32 so as to permit a rear end of the front sole 32 to be fitted therein. The heel 34 is also provided with tightening recesses 36 in conformity to the plug-in connectors 33. Thus, the tightening recesses 36 are formed in a manner to be contiguous to the guide recess 35 and

rearwardly extend therefrom. The heel 34 is further provided at a portion thereof extending over the guide groove 35 and tightening grooves 36 with a recessed space 37.

The recessed space 37 is adapted to receive an interposed member 38 therein. The interposed member 38 is made of a metal material and provided on a central portion of an upper surface thereof with a projection 39, which is formed into a height substantially flush with an upper surface of the heel 34. The projection 39 is formed therein with a threaded hole 40 so as to vertically extend in an axial direction thereof, in which a countersunk screw 41 is threadedly fitted. The interposed member 38 is also formed on each of portions of the upper surface thereof between which the projection 39 is interposed with an engagement 42 pressedly engaged with each of the plug-in connectors 33 of the front sole 32 of the front section 31a of the shoe body 31.

The rear section 31b of the shoe body 31 has a rear sole 43 mounted thereon, which is formed at a predetermined position thereof with a small hole 44 through which the countersunk screw 41 is inserted. The rear sole 43 is integrally superposedly mounted on a lower surface thereof with a rigid fiber member 45, for example, by adhesion or the like so as to reinforce the rear sole 43. The rear sole 43 is connected to a lower end 46 of a rear wall of the rear section 31b, for example, by winding.

Now, the manner of operation of the stretchable shoes of each of the first to third embodiments described above will be described hereinafter.

When the stretchable shoes of the first embodiment are small in size for an infant or a child, the second velcro-type fastener 11a of the front inner sole 9 is released or disengaged from the first velcro-type fastener 6a of the rear member 5 of the rear sole 2 to move the front section 1a or rear section 1b of the shoe body 1 along the pin 10 fitted in the elongate guide hole 7 to extend or stretch the shoe body 1. On the contrary, when the shoes are too large therefor, the front section 1a and rear section 1b are moved relative to each other to cause to approach each other, to thereby contract the shoes. Thus, the shoe body 1 of the shoes can be retractably adjusted in size as desired depending on a size of feet of a wearer. Once a size of the shoes are thus determined, the velcro -type fasteners 6a and 11a are securely engaged with each other to fix a size of the shoe body 1, to thereby permit the shoes to exhibit well-fitness.

Also, in the stretchable shoes of the second embodiment constructed as described above, when the rear sole 27 of the rear section 15b of the shoe body 15 is superposed on the heel 19 to unite the rear sole 27 and heel 19 to each other by a suitable means such as nails, an adhesive or the like, the guide recess 20 and tightening grooves 21 are formed between the rear sole 27 and the upper surface of the heel 19. Then, when the rear end of the front sole 16 is fitted in the guide groove

20, the plug-in connectors 17 are fitted in the tightening recesses 21 as shown in FIGURE 9 and concurrently the rear end of the front sole 16 contiguous to the plug-in connectors 17 is fitted in the guide recess 20. Thereafter, when the countersunk screw 22 is threadedly inserted through the small hole 26 of the front sole 18 into the interposed member 22 fixedly fitted in the front sole 16 and tightened, the rear sole 27 is firmly interposed between the front inner sole 18 and the front sole 16, so that the front sole 16, front inner sole 18, heel 19 and rear sole 27 may be firmly integrated with each other, to thereby prevent the front section 15a and rear section 15b of the shoe body 15 from separated or released from each other.

In the stretchable shoes of the third embodiment constructed as described above, when the rear sole 43 of the rear section 31b of the shoe body 31 is superposed on the upper surface of the heel 43 and then integrally joined to each other by means of nails or an adhesive, the guide recess 35 and tightening recesses 36 are formed between the rear sole 43 and the upper surface of the heel 34. Then, the rear end of the front sole 32 is inserted into the guide groove 35, so that the plug-in connectors 33 may be fitted in the tightening recesses 32 as shown in FIGURES 14, 15 and 19. The interposed member 38 is previously received in the recessed space 37; therefore, when the projection 39 is inserted between the plug-in connectors 33 of the front sole 32 and then the countersunk screw 41 is threadedly fitted through the small hole 44 of the rear sole 43 into the threaded hole 40 of the projection 39 and tightened, the front sole 32 may be securely interposed between the interposed member 38 and the rear sole 43. This results in the front sole 32, heel 34 and rear sole 43 being firmly integrated with each other, to thereby prevent the front section 31a and rear section 31b of the shoe body 31 from being unintentionally separated or loosened from each other.

As can be seen from the foregoing, the stretchable shoes of the present invention facilitate stretchable adjustment of the shoes while simplifying a structure thereof and permit a manufacturing cost thereof to be decreased, resulting in being particularly suitable for an infant and a child.

Also, the stretchable shoes of the present invention are so constructed that the velcro-type fasteners are arranged on the heel. Such construction permits a size of the shoes to be kept fixed once adjustment of the size is carried out, because engagement between the fasteners exhibits rigidity to a degree sufficient to substantially prevent release of the engagement.

Further, the stretchable shoes of the present invention permit adjustment of a size of the shoes to be readily accomplished by merely loosening the single countersunk screw kept tightened.

Claims

1. A stretchable shoe comprising a shoe body (1;15;31) having a front section (1a;15a;31a) and a rear section (1b;15b;31b), the front section including a front sole (8;16;32) and the rear section including a rear sole (2;27;43), characterised in that: the front sole (8;16;32) extends rearwards and is formed with one or more elongate projections (8;17;33); the rear section includes a corresponding recess (20;35) arranged to receive the elongate projections (8;17;33); the front and rear sections are movable relative to each other longitudinally and overlap in an overlapping zone when the elongate projection (8;17;33) is received in the recess (20;35); the shoe also including a fixing member (10;25;41) passing through the front and rear sections in the overlapping zone.

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2. A stretchable shoe as claimed in Claim 1, characterised in that the front section and the rear section incorporate means (6a,11a;30a,30b;33,42) for mutual detachable interengagement whereby separation of the front and rear sections in a particular relative position is resisted.

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3. A stretchable shoe as claimed in Claim 2, characterised in that the means for mutual interengagement is a velcro-type fastener (6a,11a;30a,30b) or a ribbed surface (42) engaging a counter-member (33).

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4. A stretchable shoe as claimed in Claim 1 comprising: a shoe body (1) divided into a front section (1a) and a rear section (1b); the front section including a front sole (8) and a front inner sole (9), each of which extends rearwardly by a predetermined length in a tongue-like manner; the rear section (1b) including a rear sole (2) which is provided on its lower surface with a heel (4) having a front edge (3); the rear sole (1b) being provided on a portion of its upper surface corresponding to the heel with a first velcro-type fastener (6a) and being formed with an elongate guide hole (7) elongatedly extending in the longitudinal direction; the front sole (8) having its rear portion inserted through the front edge (3) of the heel (4) into the inside of the heel; the front sole (8) being mounted thereon with a vertically extending pin (10); the pin (10) being fitted in the elongate guide hole (7) of the rear sole (2) to join the rear section and front section to each other, thereby providing the shoe body; the front inner sole (8) having a second velcro-type fastener (11a) mounted on its lower surface at the rear end, the second velcro-type fastener (11a) being detachably engaged with the first velcro-type fastener (6a) to unite the front section and rear section to each other.

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5. A stretchable shoe as claimed in Claim 4, characterised in that the rear section (1b) of the shoe body is detachably provided on each of both outer side surfaces at its front end with a third velcro-type fastener (6b) and the front section of the shoe body is detachably provided on each of both inner side surfaces at its rear end with a fourth velcro-type fastener (11b), the third and fourth velcro-type fasteners (6b,11b) being detachably engaged with each other.

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6. A stretchable shoe as claimed in Claim 4 or Claim 5, characterised in that the heel (4) of the rear sole (2) of the rear section has mounted on it a non-slip rubber member (14).

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7. A stretchable shoe as claimed in Claim 1, characterised in that it comprises: a shoe body (15) divided into a front section (15a) and a rear section (15b); the front section (15a) including a front sole (16) which extends rearwardly by a predetermined length and is provided at its rear end with two plug-in connectors (17), and a front inner sole (18) which extends rearwardly by a predetermined length; the rear section (15b) includes a rear sole (27) formed with an elongate hole (28); the rear section (15b) includes a heel (19) which is formed on its upper surface with a guide recess (20) for receiving the rear end of the front sole (16), and tightening recesses (21) for receiving the plug-in connectors (17); the tightening recesses (21) are arranged at the rear end of the guide recess (20) in a manner to be contiguous to the guide recess (20); the front sole (16) of the front section is formed with a fit hole (23) and an interposed member (22) formed with a threaded hole (24) is securely fitted in the fit hole (23); the front inner sole (18) is formed with a hole (26) in a manner corresponding to the threaded hole (24) of the interposed member (22) of the front sole (16); the front sole (16) is inserted at its rear end into the guide recess (20) and tightening recesses (21) of the heel (19) and the front inner sole (18) is inserted into the upper side of the rear sole (27) while interposing the rear sole (27) therebetween; and a countersunk screw (25) is inserted through the hole (26) of the front inner sole (18) and the elongate hole (28) of the rear sole (27) and securely threadedly fitted in the threaded hole (24) of the interposed member (22) of the front sole (16) to unite the front and rear sections to each other.

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8. A stretchable shoe as claimed in claim 7, characterised in that the front inner sole (18) of the front section (15a) of the shoe body is provided on its lower surface with a first velcro-type fastener (30a) and correspondingly the rear sole (27) of the rear section (15b) of the shoe body is provided on its upper surface with a second velcro-type fastener (30b) so

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as to be detachably engaged with the first fastener (30a).

9. A stretchable shoe as claimed in Claim 1, characterised in that it comprises: a shoe body (31) divided into a front section (31a) and a rear section (31b); the front section (31a) includes a front sole (32) which extends rearwardly in a tongue-like manner and is provided at its rear end with two plug-in connectors (33); the rear section (31b) includes a rear sole (43) and a heel (34); the heel (34) is formed on its upper surface with a guide recess (35) for receiving the rear end of the front sole (32) and tightening recesses (36) for receiving the plug-in connectors (33); the heel (34) is provided at a portion extending over the guide groove (35) and tightening grooves (36) with a recessed space (37); an interposed member (38) is received in the recessed space (37) and is provided at a central portion of its upper surface with a projection (39), the projection (39) being formed into a predetermined height and formed therein with a threaded hole (40) so as to extend vertically in an axial direction for threadedly receiving a countersunk screw (41), the interposed member (38) is formed on each portion of its upper surface between which the projection (39) is interposed with an engagement (42) pressedly engaged with each of the plug-in connectors (33) of the front sole (32); the rear sole (43) is formed at that portion abutted against the top surface of the projection (39) with a small hole (44); and the countersunk screw (41) is threadedly inserted through the small hole (44) of the rear sole (43) into the threaded hole (41) of the interposed member (38).

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FIG.1

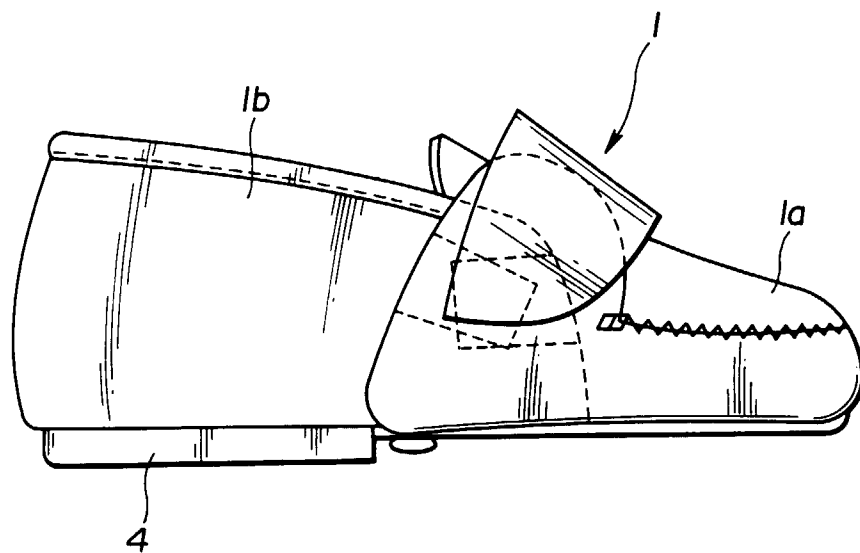


FIG.2

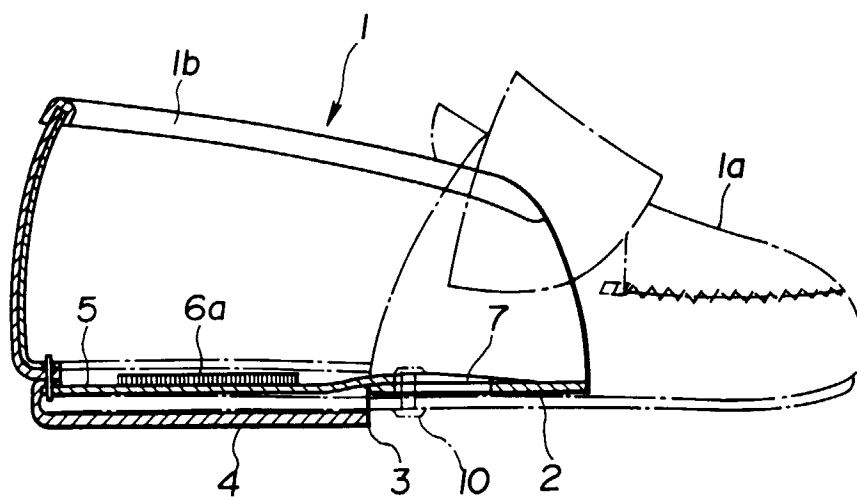


FIG.3

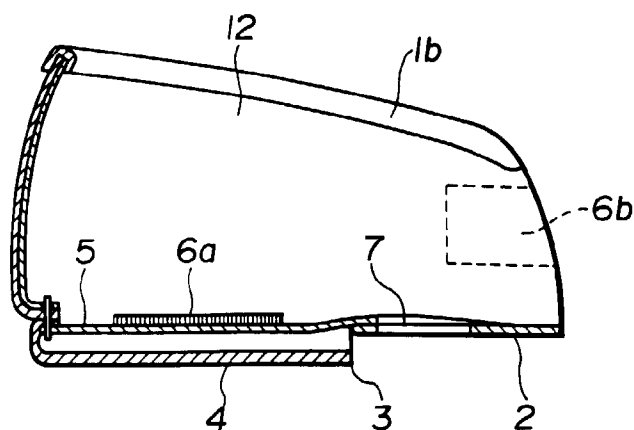


FIG.4

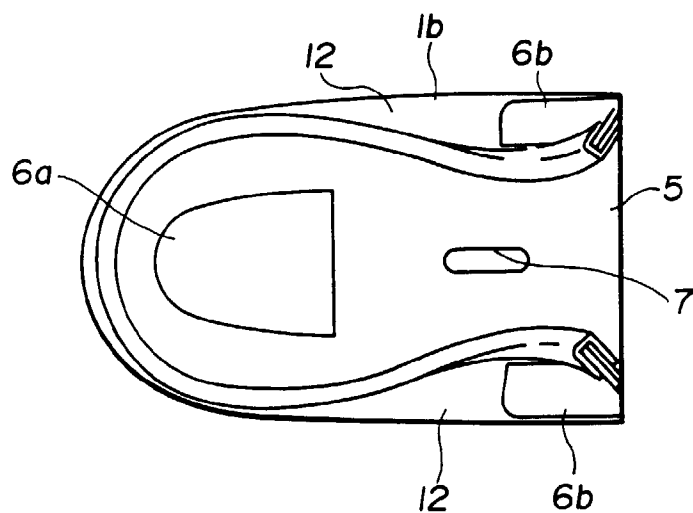


FIG.5

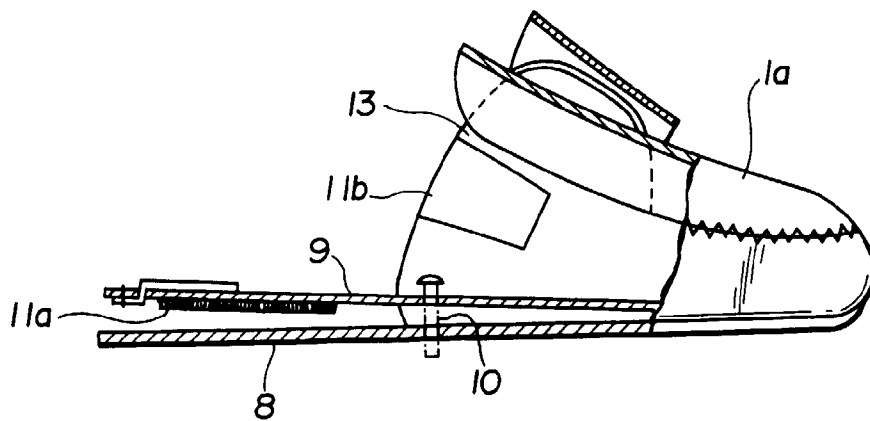


FIG.6

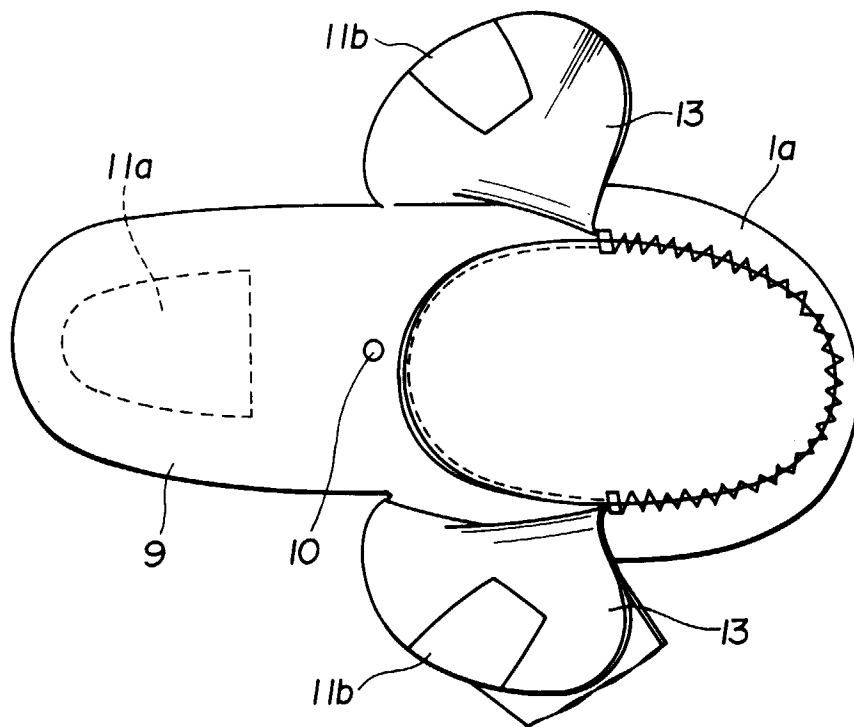


FIG.7

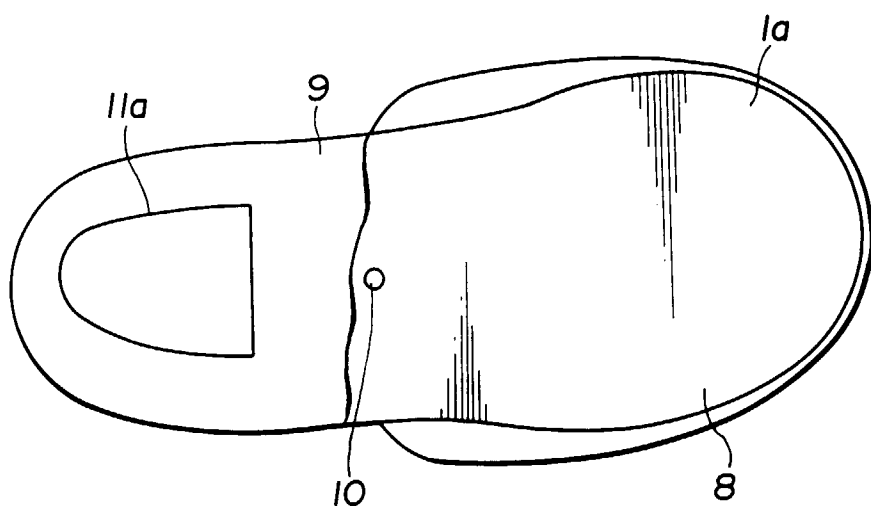


FIG.8

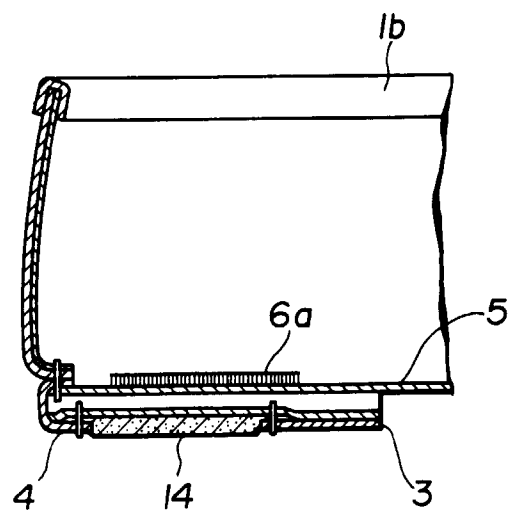


FIG.9

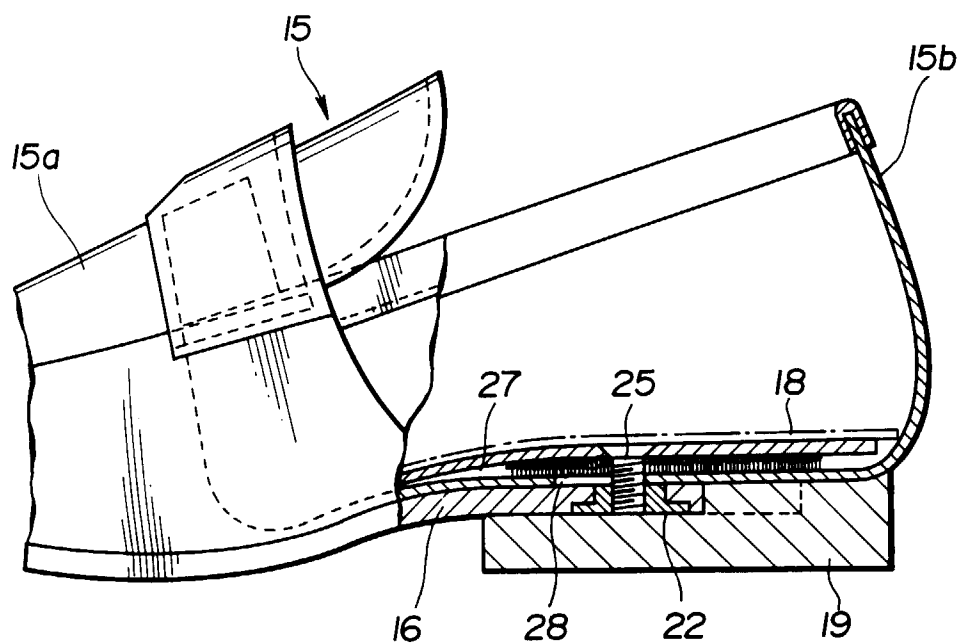


FIG.10

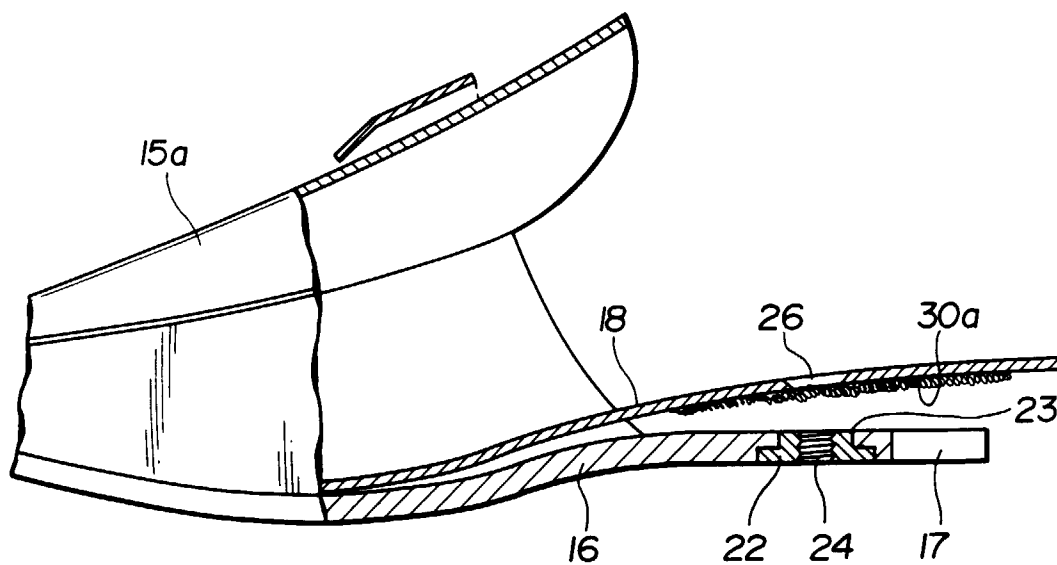


FIG.11

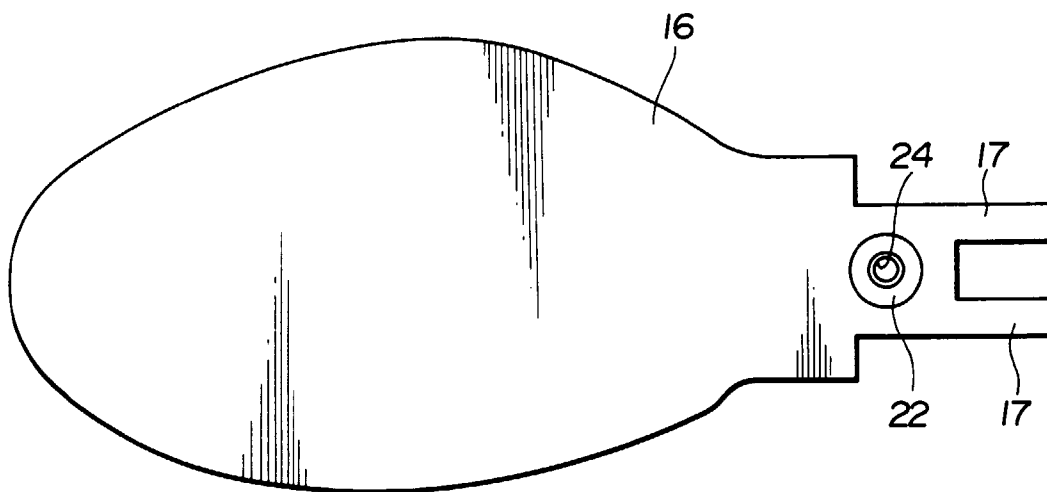


FIG.12

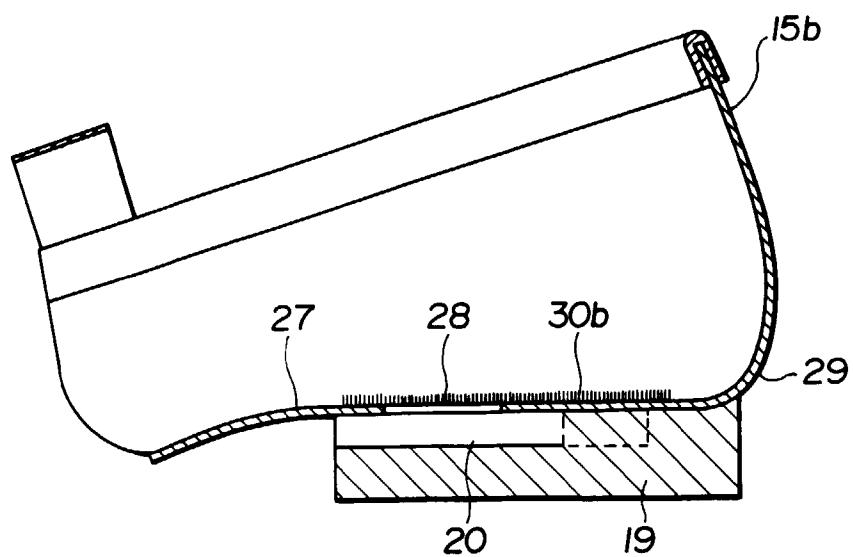


FIG.13

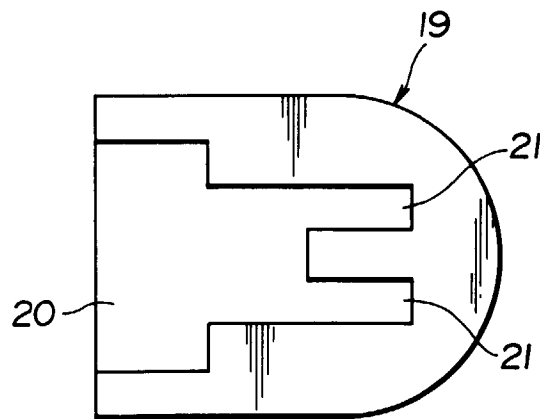


FIG.14

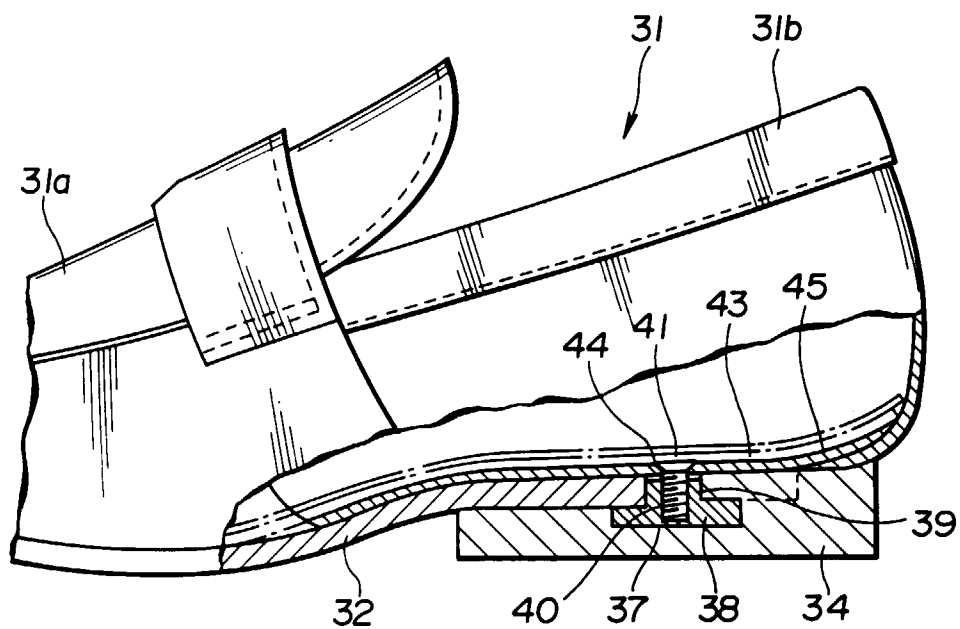


FIG.15

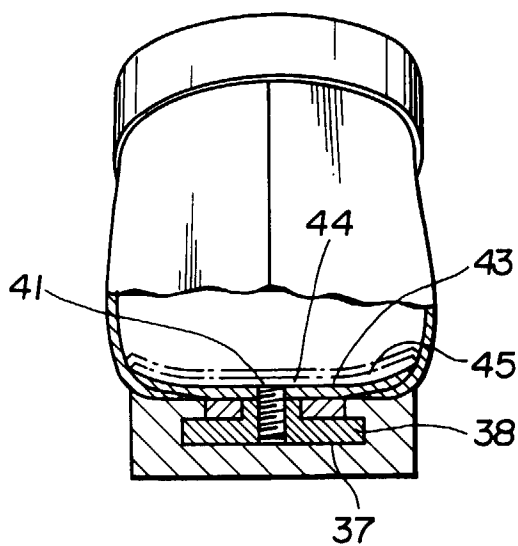


FIG.16

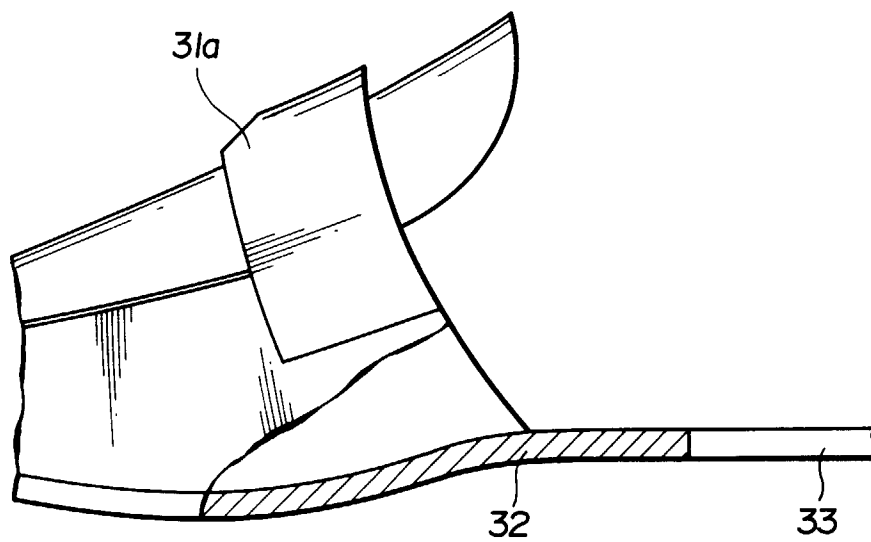


FIG.17

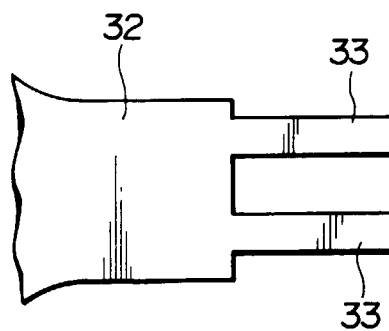


FIG.18

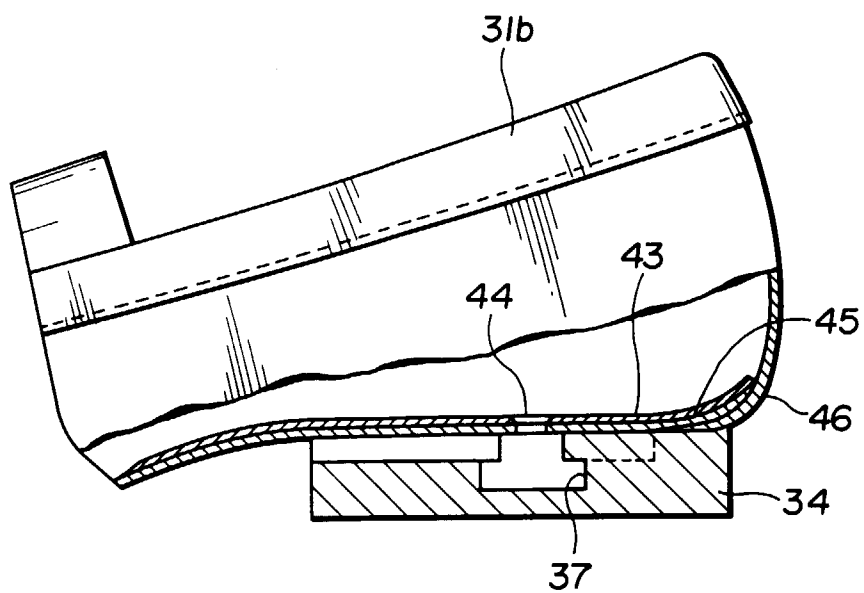


FIG.19

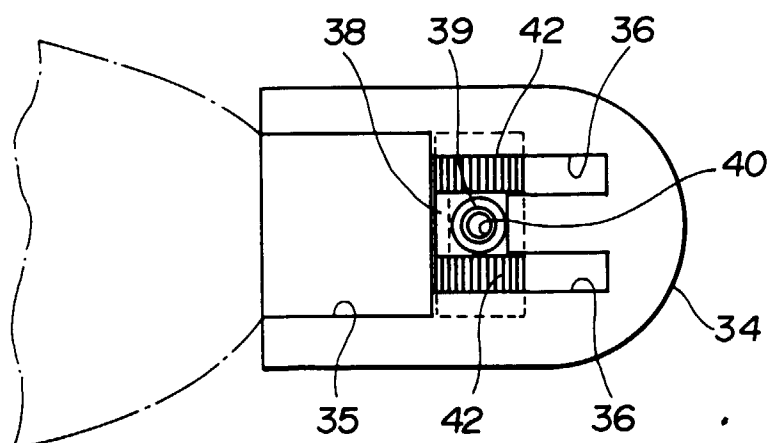
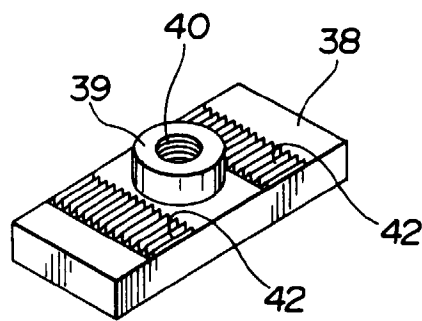


FIG.20





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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.6)
X	GB-A-1 510 495 (SHIINA A) 10 May 1978 * the whole document *	1,2	A43B3/26
X	FR-A-727 209 (CARACOTCHIAN) * the whole document *	1,2	
A		7,9	
X	US-A-2 952 925 (HELD) * the whole document *	1-3	
A		4-6,8	
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X	DE-C-820 870 (IBSCH) * the whole document *	1,2	
X	DE-C-174 665 (EISENLOHR ET AL) * the whole document *	1,2	
X	FR-A-1 132 881 (QUINN) * the whole document *	1,2	
A		7,9	
X	FR-A-2 060 191 (SPINDEL ET AL) 18 June 1971 * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) A43B
X	FR-A-2 077 821 (SPINDEL) 5 November 1971 * the whole document *	1,2	
X	GB-A-465 968 (HUTTON) * page 3, line 27 - line 41; figures *	1,2	
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A		7,9	
X	US-A-2 112 052 (SMITH) * the whole document *	1-3	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28 May 1996	Examiner Scholvinck, T
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			

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Application Number
EP 96 30 1064

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.6)
A	FR-A-2 629 313 (RENALDO LEANDRE) 6 October 1989 * claims; figures * -----	1,3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28 May 1996	Examiner Scholvinck, T
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