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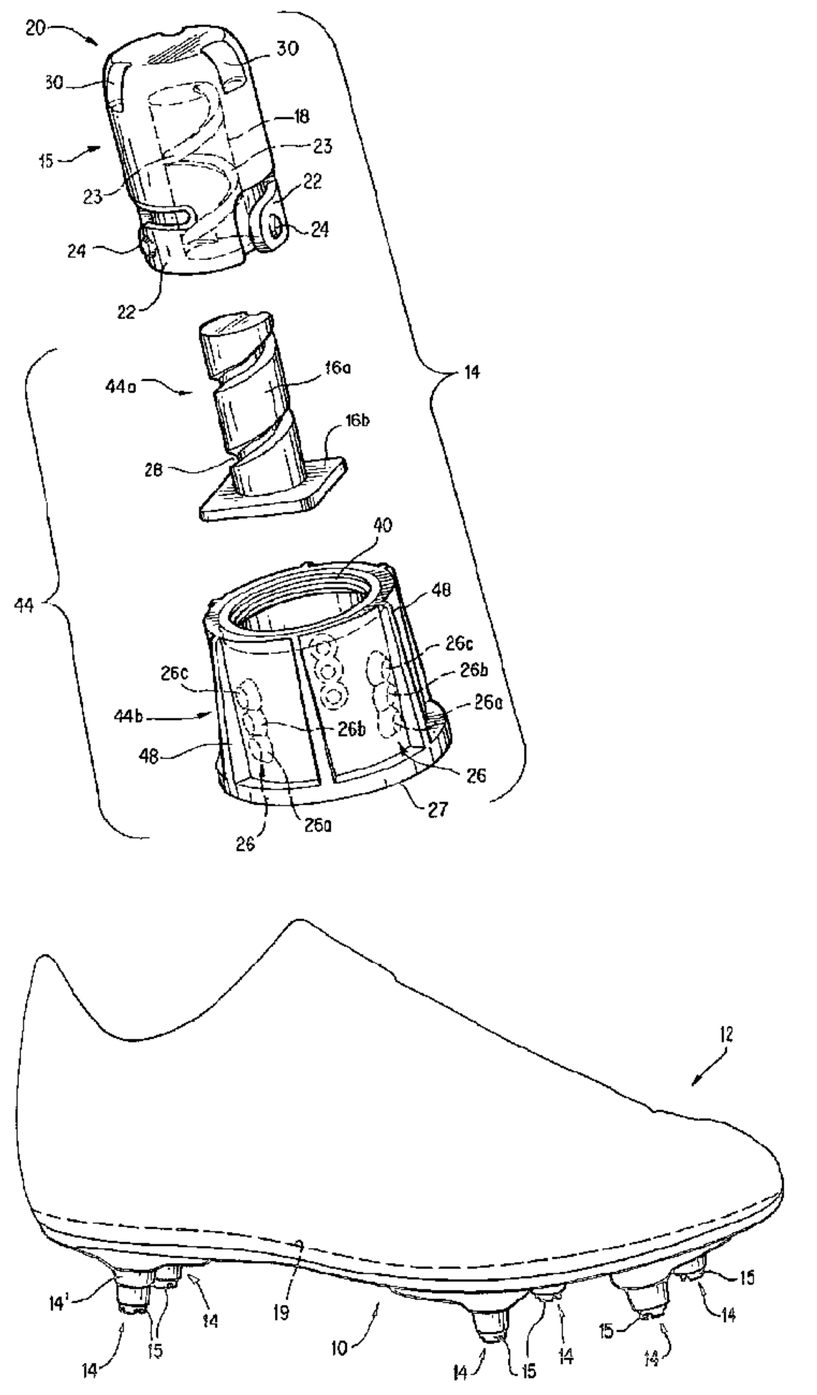
(54) Titre : CHAUSSURE POURVUE D'UN ELEMENT DE CONTACT AVEC LE SOL ET PROCEDE DE REGLAGE DUDIT ELEMENT

(54) Title: ARTICLE OF FOOTWEAR WITH A GROUND-ENGAGING MEMBER AND METHOD OF ALTERING A GROUND-ENGAGING MEMBER



(57) Abrégé/Abstract:
An article of footwear provided with a ground engaging unit. The ground-engaging unit according to the present invention extends outwardly from a sole of the article of footwear, and has at least a portion that can be adjusted to present a varying height profile

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(57) Abrégé(suite)/Abstract(continued):
(i.e., a distance that the ground-engaging unit extends from the sole). The ground-engaging unit is preferably a single unit attached or otherwise fixed to the sole. It preferably includes a tip movably mounted on a base. The tip is selectively extendible or retractable with respect to the base. In one embodiment of the present invention, the tip and the base are threadedly engaged, such that the height of the tip is adjustable by rotating the tip relative to the base between predetermined positions. A locking mechanism may also be provided to fix the tip and base in a particular relative relationship.

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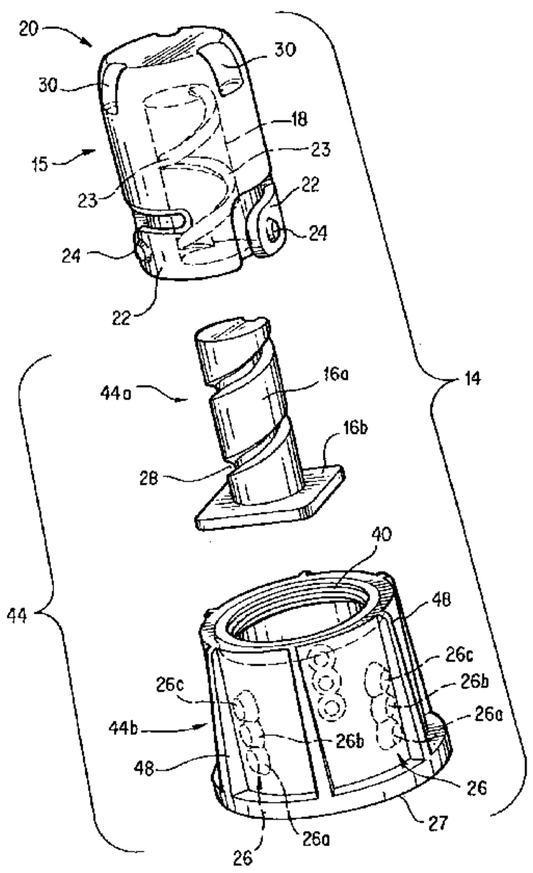
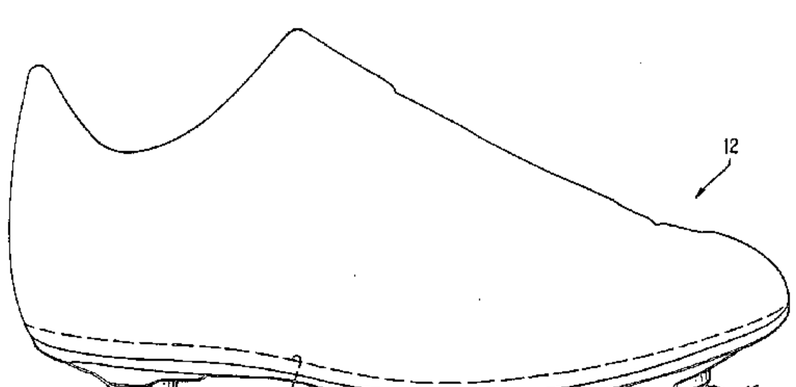


(57) Abstract: An article of footwear provided with a ground engaging unit. The ground-engaging unit according to the present invention extends outwardly from a sole of the article of footwear, and has at least a portion that can be adjusted to present a varying height profile (i.e., a distance that the ground-engaging unit extends from the sole). The ground-engaging unit is preferably a single unit attached or otherwise fixed to the sole. It preferably includes a tip movably mounted on a base. The tip is selectively extendible or retractable with respect to the base. In one embodiment of the present invention, the tip and the base are threadedly engaged, such that the height of the tip is adjustable by rotating the tip relative to the base between predetermined positions. A locking mechanism may also be provided to fix the tip and base in a particular relative relationship.



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ARTICLE OF FOOTWEAR WITH A GROUND-ENGAGING MEMBER AND METHOD OF ALTERING A GROUND-ENGAGING MEMBER

Field of the invention:

[01] The present invention relates to an article of footwear having one or more ground-engaging members, especially an athletic shoe having one or more selectively alterable ground-engaging members (such as spikes, cleats, etc.). More particularly, the present invention relates to ground-engaging members having a variable height.

Background of the invention:

[02] It is generally known to provide one or more ground-engaging members protruding from the sole of a shoe, especially an athletic shoe for activities such as golf, soccer, track, baseball, and "American-style" football. Such ground-engaging members are variously known in the art as cleats, spikes, studs, leaves, blades, triangles, nubs, etc., and generally serve to increase traction between the shoe and the ground surface.

[03] Furthermore, it is conventionally known to use particular types of ground-engaging members for certain types of playing surfaces. Most generally, the selection of a particular ground-engaging member requires balancing traction-increasing characteristics of the ground-engaging members versus other playing factors. For example, a player who needs to quickly or suddenly turn while running must be able to quickly pick up his or her feet from the playing surface. Otherwise, if the player "plants" a foot, his or her ankle or knee may be injuriously twisted when attempting to change direction suddenly. Therefore, the ground-engaging members used in this case should not increase traction too much in order to avoid injury. On the other hand, a player whose movement involves mostly running in one direction can benefit from a relatively greater increase in traction.

[04] Thus, for example, molded cleats made from hard rubber or a thermoplastic material are commonly used on hard/firm natural ground surfaces (e.g., hard dirt). Relatively smaller molded rubber nubs are commonly used on artificial turf and the like. Also, relatively thin spikes are conventionally used in golf and in track.

[05] For activities taking place on soft ground (e.g., wet fields, soggy grass, or muddy ground), it is generally known to use removable ground-engaging members. This is done to enable the user to use ground-engaging members having different sizes based on the type of field being played on, and the condition of the field. Conventional removable ground-engaging members are typically engaged with a shoe sole by way of cooperating screw threads or other rotational engagement.

[06] Changing conventional removable ground-engaging members is generally time-consuming and labor intensive, because a collection of individual ground-engaging members must be carried, and changing each ground-engaging member requires removing one ground-engaging member from a shoe in addition to mounting a new ground-engaging member. Furthermore, individual ground-engaging members may be dropped inadvertently, and, as a result, may be lost, particularly when changing ground-engaging members in a hurried manner.

[07] Furthermore, conventional removable ground-engaging members must be adequately rotationally tightened so as to ensure good engagement between the shoe and the ground-engaging member. However, it is conventionally difficult to recognize when the ground-engaging member has been adequately tightened. Thus, the ground-engaging member may be inadvertently over-torqued in an attempt to ensure good engagement. This can damage the screw threads on the shoe and/or on the ground-engaging member, making it difficult or even impossible to subsequently disengage the ground-engaging member from the shoe when desired. On the other hand, the ground-engaging member may be inadvertently under-torqued (for example, to avoid damage

caused by over-torquing). When this occurs, the ground-engaging member may not function as a stable traction device and/or may become loose and be susceptible to falling off of the shoe.

[08] In view of the foregoing, it is desirable to provide the ground-engaging functionality of conventional ground-engaging members as discussed above, while avoiding problems associated with using individual elements that are selectively attached to a shoe sole.

Summary of the invention:

[09] The present invention is therefore generally directed to an article of footwear (such as a shoe, and especially, but not necessarily only, an athletic shoe like a cleated soccer shoe) having a selectively alterable ground-engaging member provided on a sole, and a method for altering ground-engaging characteristics of an article of footwear.

[10] A ground-engaging member according to the present invention is preferably provided as a single unit engaged with or otherwise attached to the sole. The ground engaging member has a portion extending outwardly from the sole that is positionable at one a plurality of positions relative to the sole. For example, the ground-engaging member may include a base engaged with the sole and a tip that is selectively extendable and retractable in a telescopic manner (to a limited extent) relative to the base so as to present a selectively variable height (i.e., a distance that the ground-engaging member extends from the sole). The tip may be extended or retracted relative to the base by any suitable method, including (for example and without limitation) manually or with an appropriately shaped tool.

[11] The ground-engaging member according to the present invention may further include a tip locking mechanism for selectively holding the tip in one or more particular positions relative to the base. Thus, for example, the tip can be telescopically moved relative to the base and selectively locked into a given position relative to the base.

[12] In one example of the present invention, the tip may be threadedly mounted with respect to the base such that the tip can be selectively extended or retracted with respect to the base by appropriately rotating the tip relative to the base. The tip can be rotated, for example and without limitation, manually or an appropriately shaped tool, such as a tool shaped to engage a distal end portion of the tip.

[13] In one example of the present invention, therefore, a cleated article of footwear has a plurality of cleats, each cleat including a telescoping ground-engaging portion adjustably positionable relative to the remainder of the cleat at one of a plurality of heights.

[14] When a tip is adjusted with respect to the base according to the present invention, it is desirable to provide a detectable feedback to indicate that the tip is properly engaged in a given position. In a particular (but not exclusive) example of the present invention, the detectable feedback is an audible feedback (such as, without limitation, a snapping sound or a click sound) that a user can hear when the tip is properly located in a predetermined position relative to the base.

[14a] In accordance with an aspect of the present invention there is provided an article of footwear, comprising: an upper; and a sole including a plurality of ground engaging members extending therefrom in which at least one of the ground engaging members includes a base having an interior surface and the base being attached to the sole, the at least one of the ground engaging members including a telescoping portion being received within the base, the telescoping portion being configured for linear movement at a plurality of predetermined heights responsive to rotational movement about an axis, the telescoping portion having a plurality of locking members being radially biased towards the interior surface of the base, said locking members configured for selective

locking engagement with the base at each of said plurality of predetermined heights.

[14b] In accordance with an aspect of the present invention there is provided a cleated article of footwear comprising: a plurality of cleats, each said cleat including a telescoping ground-engaging portion adjustably positionable within the remainder of its respective cleat between a plurality of different heights, said telescoping ground-engaging member includes a plurality of circumferentially extending spring biased members with a protrusion portion configured to lockingly engage with said remainder of said cleat to maintain said telescoping ground-engaging portion in a locked position at a given selected height of said plurality of different heights.

Brief description of the drawings:

[15] The present invention will be described in detail hereinbelow with reference to the attached drawings, in which:

[16] Figure 1 is a side elevational view of an article of footwear provided with a plurality of ground-engaging units according to the present invention;

[17] Figure 2 is a bottom plan view of the article of footwear illustrated in Figure 1;

[18] Figure 3 is a perspective view of a ground-engaging unit according to the present invention;

[19] Figure 4 is an exploded perspective view illustrating constituent parts of one example of a ground-engaging unit according to the present invention;

[20] Figure 5 is a bottom view of an example of a tip according to the present invention; and

[21] Figure 6 is a perspective view of an example of a tool for rotating a tip of the ground-engaging unit according to the present invention.

Detailed description of the present invention:

[22] Figure 1 is a lateral (i.e., from the laterally outer side) elevational view of an article of footwear. The article of footwear, such as an athletic shoe 12, is preferably cleated and may be provided with a footplate 10. A right shoe happens to be illustrated by way of example, but this should not be taken as limiting the present invention. Only an outline of the shoe upper is shown in Figure 1 because the details thereof are not germane to the present invention.

[23] For the purposes of the description herein, shoe 12 has a "sole" which includes footplate 10. However, other parts that may be included in a sole, such as a midsole, etc. have been omitted from the drawings for clarity. In use, a user rests his foot on a footbed 19 inside the shoe 12.

[24] Footplate 10 includes at least one ground-engaging unit 14 (such as a cleat) extending from footplate 10. Commonly, footplate 10 includes a plurality of ground-engaging units 14 distributed over the surface of footplate 10. Figure 2 illustrates one example of how ground-engaging units 14 may be distributed over the surface of footplate 10.

[25] Generally, the article of footwear can be divided into a forefoot region 11 (generally to the right of line A-A in Figure 2) and a heel or rearfoot region 13 (generally to the left of line A-A in Figure 2). Thus, in some cases, the forefoot region 11 may include a greater number of ground-engaging units 14 than the heel region 13, as illustrated in Figure 2.

However, it is emphasized that the specific number, location, and/or shape of the ground-engaging units 14 that are provided on footplate 10 may vary widely and still be in accordance with the present invention as presently contemplated.

[26] Each ground-engaging unit 14 according to the present invention may include, in part, a tip 15 (see, for example, Figures 3 and 4) adjustably mounted relative to a base 44. Base 44 is preferably fixedly attached to the sole. Generally, tip 15 is telescopically coupled to base 44 so that an extent to which tip 15 extends from base 44 can be varied. In a particular example of the present invention, tip 15 is rotatably coupled in a telescopic manner to base 44. In one example, tip 15 may adopt one of a plurality of fixed positions relative to base 44, whereby tip 15 can be retained in a desired position. Preferably, tip 15 is selectively locked in a given position, so that tip 15 does not move under normal use. For example, the traction performance of shoe 12 can be adjusted by varying the position of tip 15.

[27] In one arrangement of the present invention, base 44 includes a stem 44a and a wall member 44b. For example, stem 44a includes a shaft 16a extending from a base plate 16b. Tip 15 has a bore 18 (see, for example, Figure 5) formed therein for receiving shaft 16a. Generally, tip 15 is telescopically movable along shaft 16a so as to be selectively extendable or retractable relative to stem 44a to raise or lower tip 15 relative to the footbed 19 and the footplate 10 of shoe 12. The relatively large area presented by base plate 16b and base 27 which is part of the wall member 44b, as compared to the area of the end of shaft 16a, helps to increase the weight-bearing characteristics of ground-engaging unit 14 by spreading the load borne by tip 15 and transmitted to shaft 16a over the comparatively wider area of base plate 16b.

[28] It is desirable to provide a locking mechanism so that tip 15 can be maintained in a desired position relative to base 44 during athletic use. Any desired locking mechanism may be used in accordance with the present invention. In one specific example of a locking mechanism, tip

15 includes a ground-contacting head portion 20 at one end and a shielded portion (shielded by wall member 44b) including at least one spring member 22 having an outwardly extending protrusion 24 provided at least adjacent to a free end of spring member 22. Three spring members 22 are illustrated by way of example. Spring members 22 may, for example, extend in a circumferential direction about an exterior periphery of tip 15 (see, especially, Figure 5) although other arrangements are operable in accordance with the present invention. For example, one or more radially extensible locking members may be provided that are radially outwardly biased (not shown).

[29] In addition, wall member 44b surrounds stem 44a so as to define an annular space between stem 44a and wall member 44b in which a peripheral portion of tip 15 passes. However, protrusions 24 protrude radially outward beyond the outer peripheral surface of tip 15. Thus, in order to accommodate protrusions 24 in the annular space between shaft 16a and wall member 44b, the corresponding spring members 22 are resiliently compressed inward. One or more recesses 26 are preferably provided in the interior surface of wall member 44b corresponding to protrusions 24. When the protrusion and recess are aligned, then protrusions 24 will resiliently snap into engagement with a respective recess 26. This maintains tip 15 in a desired position relative to stem 44a.

[30] It will be appreciated, then, that a plurality of recesses 26a, 26b, 26c can be provided, each corresponding to a respective desired position of tip 15 relative to stem 44a. This is explained in further detail below.

[31] In order to further increase the axial load bearing characteristics of ground-engaging unit 14, it may be desirable to threadedly engage tip 15 with stem 44a by providing a first thread 23 on an interior of bore 18 and a corresponding second thread 28 on the exterior of shaft 16a, as illustrated in, for example, Figures 4 and 5. By providing such a threaded relationship, the height of tip 15 can be varied by rotating tip 15 about shaft 16a.

[32] Tip 15 can be selectively locked in a desired position relative to shaft 16a in a manner similar to that described above – namely, providing recesses 26 on the interior surface of wall member 44b in locations corresponding to desired axial positions of tip 15. It will be appreciated that the thread pitch can be varied and/or the position of the recesses 26 on the interior surface of wall member 44b can be varied so that tip 15 can assume a plurality of axial positions. In a particular example, tip 15 can assume a plurality of distinct axial positions. For example, the axial position of tip 15 may be varied in 2.0 mm increments. Therefore, ground-engaging unit 14 may have an effective height between, for example, about 12 mm to about 16 mm, in about 2.0 mm steps.

[33] As seen in Figures 4 and 5, a plurality of spring members 22 may be provided, each including a respective protrusion 24. In one example, as seen in Figure 5, the respective protrusions 24 are spaced about an exterior periphery of tip 15 at about 120 degree intervals. In general, the protrusions are preferably (but not necessarily) regularly spaced about the periphery of tip 15.

[34] With the use of multiple spring members 22 as seen in Figures 4 and 5, pluralities of recesses 26 may be provided in sets located about the interior periphery of wall member 44b. For example, three groups of angularly-spaced recesses are located on the interior wall of wall member 44b as seen in phantom in Figure 4. Preferably, the groups are equidistantly-spaced. Accordingly, since three groups of recesses are provided in this embodiment, the groups of recesses are preferably spaced 120 degrees apart about the interior periphery of wall member 44b. The number of vertically-spaced recesses within each group of recesses correspond to the number of fixed positions of the tip 15 relative to the base 44. The provision of three groups of recesses and the provision of three recesses in each group of recesses in this example is strictly for the purpose of illustrating the present invention. It is expressly emphasized that both parameters can be varied according to the present invention as may be needed.

[35] As seen in phantom in Figure 4, recesses 26a, 26b, 26c extend along a longitudinal direction of wall member 44b. In one example of the present invention, respective recesses or respective groups of recesses are coplanar in a substantially horizontal plane (i.e., the three of the bottom recesses 26a are coplanar with each other, the three of the intermediate recesses 26b are coplanar with each other, and the three of the top recesses 26c are coplanar with each other). Each "layer" of recesses corresponds to a given distinct position of tip 15 with respect to base 44. Thus, as tip 15 is rotated, protrusions 24 are rotatably forced into and out of engagement of the recesses in the different coplanar "layers." For example, the lower recesses 26a correspond to a ground-engaging unit height of 12 mm, the row of intermediate recesses 26b correspond to a height of 14 mm, and the row of top recesses 26c correspond to a height of 16 mm. Therefore, if a protrusion 24 is initially engaged with a recess 26a, then rotating the tip 15 120 degrees counterclockwise will place that protrusion 24 in engagement with a recess 26b in the set of recesses spaced 120 degrees apart from the first set of recesses and tip 15 will rise above base 44 by, for example, 2 additional millimeters. While the illustrated embodiment shown three protrusions and three sets of recesses, it is recognized that the number of recesses or protrusions can be greater or less than those in the illustrated and described arrangement.

[36] The engagement between protrusions 24 and recesses 26 lock tip 15 into a given position relative to base 44. This locking force can be overcome by exerting a suitable amount of rotational force to tip 15.

[37] Tip 15, stem 44a, and wall member 44b may be made from any material exhibiting sufficient resistance to material fatigue. In one example of the present invention, the aforementioned elements of ground-engaging unit 14 may be made from molded glass-filled nylon 12 or polyethermide. Alternatively, at least tip 15 may be formed from metal. In one variation of the present invention, stem 44a and wall member 44b may be unitarily formed.

[38] Generally, base 44 is molded into footplate 10. For example, the material constituting footplate 10 may be overmolded at least adjacent to a distal edge of wall member 44b. In this regard, an exterior surface of wall member 44b may optionally be provided with ribs or splines 48 to provide an increased bonding area, keep the cross-sectional shape substantially circular during molding, and/or prevent base 44 from rotating within a raised portion 14' of footplate 10 during play and/or adjustment. In one example of the present invention, the material constituting the footplate 10 may be molded over the exterior surface of wall member 44b to form raised portions 14' extending outwardly from the surface of footplate 10, whereby substantially only a portion of tip 15 protrudes outwardly therefrom.

[39] Tip 15 may be rotated by any desirable method. In one example of the present invention, it may be desirable to use a tool to rotate tip 15 (especially considering the force needed to overcome the locking force provided by spring members 22). In particular, a tool may provide better force transfer in rotating tip 15. Therefore, the head portion 20 of tip 15 may be provided with one or more notches 30 (or other engagement points) for cooperating with a tool for rotating tip 15. Notches 30 may be provided on the head portion 20 (as seen, for example, in Figure 4). Alternative examples include, without limitation, longitudinally extending notches along the periphery of tip 15 (not shown).

[40] It is noted that providing notches in the head portion 20 of tip 15 may, in effect, present a more pointed ground contact area which can make it easier for tip 15 to penetrate the ground.

[41] An example of a tool for use with the present invention is illustrated in Figure 6. Tool 32 includes a manually grippable handle or the like 34 and a head portion 36 attached to handle 34. Head portion 36 includes protrusions or nubs 38 arranged and/or shaped to engage with notches 30 provided in head portion 20.

[42] Tip 15 may be either axially symmetrical (e.g., conical, frusto-conical, pyramidal, substantially cylindrical, etc.) or may be uniquely shaped for a given activity or sport.

[43] A sealing member, such as an O-ring 40 is preferably provided in the annular space between wall member 44b and shaft 16a, for example, at or adjacent to a distal edge of wall member 44b. Most preferably, a radially inner portion of O-ring 40 contacts the peripheral surface of tip 15. O-ring 40 prevents dirt and debris from lodging or caking in the annular space between wall member 44b and shaft 16a. In addition, as tip 15 is rotated upwardly and downwardly from base 44, O-ring 40 provides a wiping action against the peripheral surface of tip 15 to help keep tip 15 clean. Also, O-ring 40 may provide frictional contact resistance that helps to retard undesirable rotation of tip 15. O-ring 40 may be made of any known, soft and resiliently pliable material, such as, without limitation, soft plastic or rubber.

[44] As mentioned above, ground-engaging unit 14 may be provided in a thickened or raised portion 14' of footplate 10. Using a plurality of base portions 14' in this manner permits the rest of footplate 10 to remain relative thin, and importantly, flexible. In contrast, when raised base portions 14' are not provided, the entire sole (including footplate 10) must be made comparatively thicker overall in order to accommodate the ground-engaging units 14 therein.

[45] It is a feature of the present invention to adjust respective ground-engaging units 14 to differing heights. Thus, the ground engaging characteristics of the article of footwear can be altered by providing a given arrangement of ground-engaging units 14 of varying (or identical) heights. This permits even greater control over the ground engaging characteristics of the article of footwear.

[46] Therefore, according to the present invention, the ground-engaging characteristics of a shoe can be selectively altered by adjusting the respective heights of ground-engaging units 14 provided on the sole of a shoe. The heights (i.e., the heights of the respective tips 15 above

the sole) of the ground-engaging units 14 can be all changed to the same height. Also, the heights of the ground-engaging units 14 can be all changed to different respective heights. Finally, some heights can be made the same while others are set to different heights. To change the height of a given ground-engaging unit 14, tip 15 is, for example, rotated so as to change its height relative to the remainder of the shoe sole. This rotation can be accomplished by a manual technique or by using a tool (like that illustrated in Figure 6, for example) to engage and rotate tip 15. If, for example, tool 32 is used, a user grips tool 32 by handle 34 and positions tool 32 so that protrusions 38 on the tool head 36 engage notches 30 on tip 15. Thereafter, a torque is applied that is sufficient to overcome the engagement between spring-biased protrusions 24 and recesses 26. Because of the position of recesses 26 on the interior surface of wall member 44b and/or the thread pitch of the threaded engagement between tip 15 and shaft 16a, the telescopic position of tip 15 can be adjusted as desired so that the protrusions 24 engage another set of the recesses 26 corresponding to a desired telescopic position of tip 15. For example, it may be desirable to raise tip 15 so as to increase the traction effects provided. Because the present invention does not use a physically separate part (such as a conventionally detachable stud or spike), the process of adjusting ground-engaging characteristics of a shoe is simplified. In particular, the present invention avoids the use of a plurality of physically separate elements that have to be individually sorted and mated to a shoe and that can be inadvertently dropped or even lost.

[47] Thus, while there have been shown and described and pointed out fundamental novel features of the present invention as applied to preferred embodiments thereof, it will be understood that various omissions and substitutions and changes in the form and details of the devices illustrated, and in their operation, and in the method illustrated and described, may be made by those skilled in the art without departing from the spirit of the invention as broadly disclosed herein.

CLAIMS

1. An article of footwear, comprising:

an upper; and

a sole including a plurality of ground engaging members extending therefrom in which at least one of the ground engaging members includes a base having an interior surface and the base being attached to the sole, the at least one of the ground engaging members including a telescoping portion being received within the base, the telescoping portion being configured for linear movement at a plurality of predetermined heights responsive to rotational movement about an axis, the telescoping portion having a plurality of locking members being radially biased towards the interior surface of the base, said locking members configured for selective locking engagement with the base at each of said plurality of predetermined heights.

2. The article according to claim 1, wherein said locking members comprise a leaf spring.

3. The article according to claim 2, further comprising a seal disposed on the base configured for sealing engagement with said telescoping portion.

4. The article according to claim 2, wherein said interior surface of said base includes a depression at said predetermined heights for locking engagement.

5. The article according to claim 4, wherein said depressions are circumferentially spaced about said interior surface of the base at 120 degrees apart.

6. The article of footwear according to claim 2, wherein said telescoping portion is provided on a steam.

7. The article of footwear according to claim 6, wherein said stem and telescoping portion are threadedly engaged for said linear movement and said rotational movement.

8. The article according to claim 7, wherein a pitch of said thread engagement at said predetermined heights of said telescoping portion is spaced 2 mm from a next said predetermined height of said telescoping portion.

9. The article according to claim 1, wherein said sole includes a footplate and said footplate is made from a molded material, said base being overmolded within a portion of said footplate.

10. The article according to claim 1, wherein said locking members comprise transverse spring members extending in a circumferential direction relative to said telescoping portion, each said spring member being circumferentially spaced apart by equidistant circumferentially about said telescoping portion.

11. The article according to claim 10, wherein said plurality of depressions comprises a plurality of sets of three depressions, each set of three depressions corresponding to a respective said predetermined height of telescoping portion such that said locking members engage a respective set of depressions.

12. The article according to claim 1, wherein a distal portion of said telescoping portion is shaped to cooperate with a tool for rotating said telescoping portion.

13. A cleated article of footwear comprising:

a plurality of cleats, each said cleat including a telescoping ground-engaging portion adjustably positionable within the remainder of its respective cleat between a plurality of different heights, said telescoping ground-engaging member includes a plurality of circumferentially extending spring biased members with a protrusion portion configured to lockingly engage with said remainder of said cleat to maintain said telescoping ground-engaging portion in a locked position at a given selected height of said plurality of different heights.

14. The article of footwear according to claim 13, wherein said remainder of said cleat includes a resilient sealing element configured to circumferentially abut a peripheral surface of said telescoping ground-engaging portion.

15. The article of footwear according to claim 13, wherein said telescoping ground-engaging portion includes a distal tip provided with at least one recess shaped and arranged to receive a torque-applying tool.

16. The article of footwear according to claim 14, wherein said remainder of said cleat includes a plurality of receiving portions configured to lockingly receive therein the protrusion portion of said spring biased members.

17. The article of footwear according to claim 16, wherein said remainder of said cleat includes a resilient annular sealing element configured for sealing engagement with a peripheral surface of said telescoping ground-engaging portion.

18. The article of footwear according to claim 14, further comprising a footplate on which said plurality of cleats are provided, each said cleat comprising a base portion, a material from which said footplate is made being overmolded over at least a portion of an outer side of said base portion.

19. The article of footwear according to claim 13, wherein said outer side of said base portion includes at least one longitudinally extending rib formed thereon.

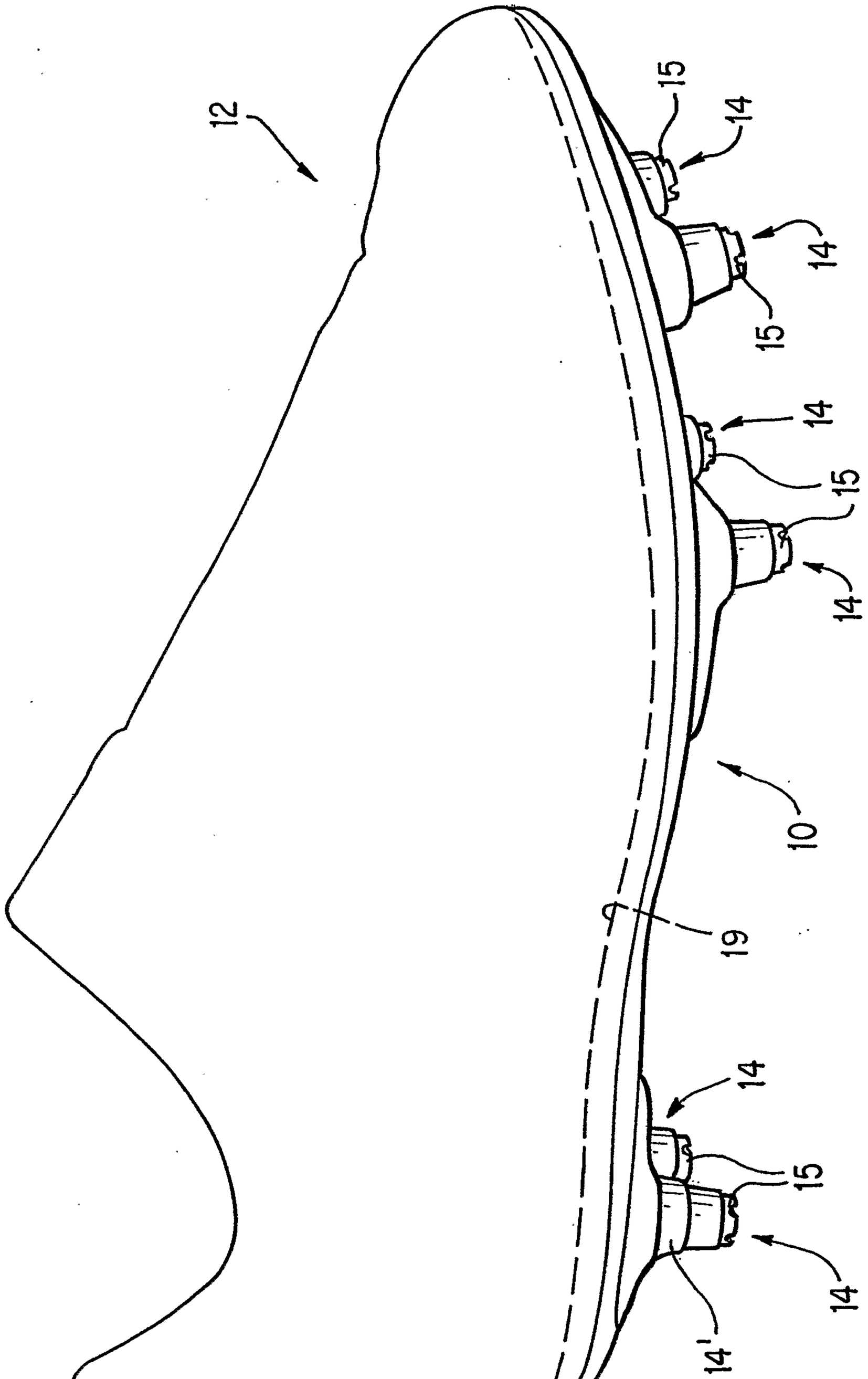

FIG. 1

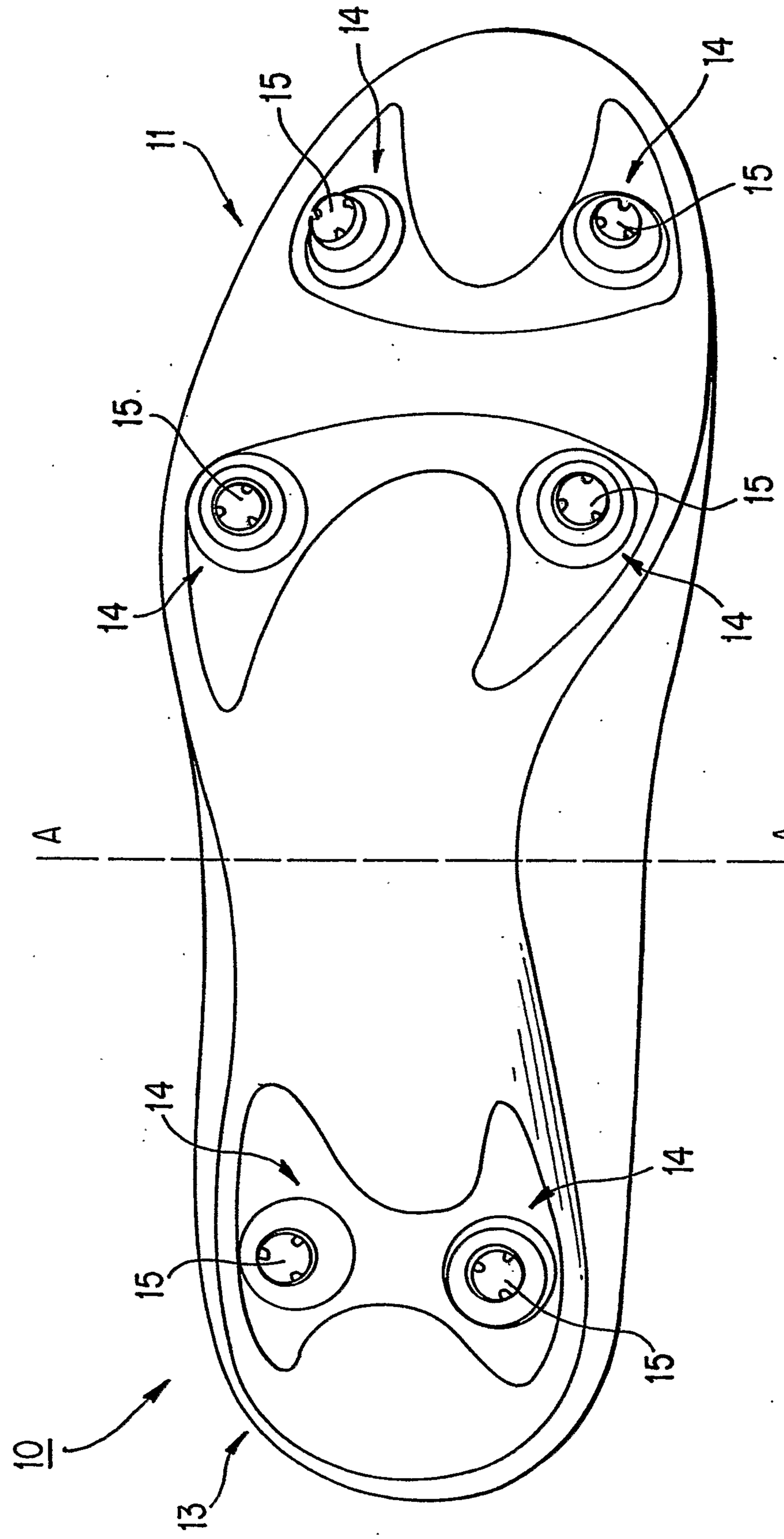

FIG. 2

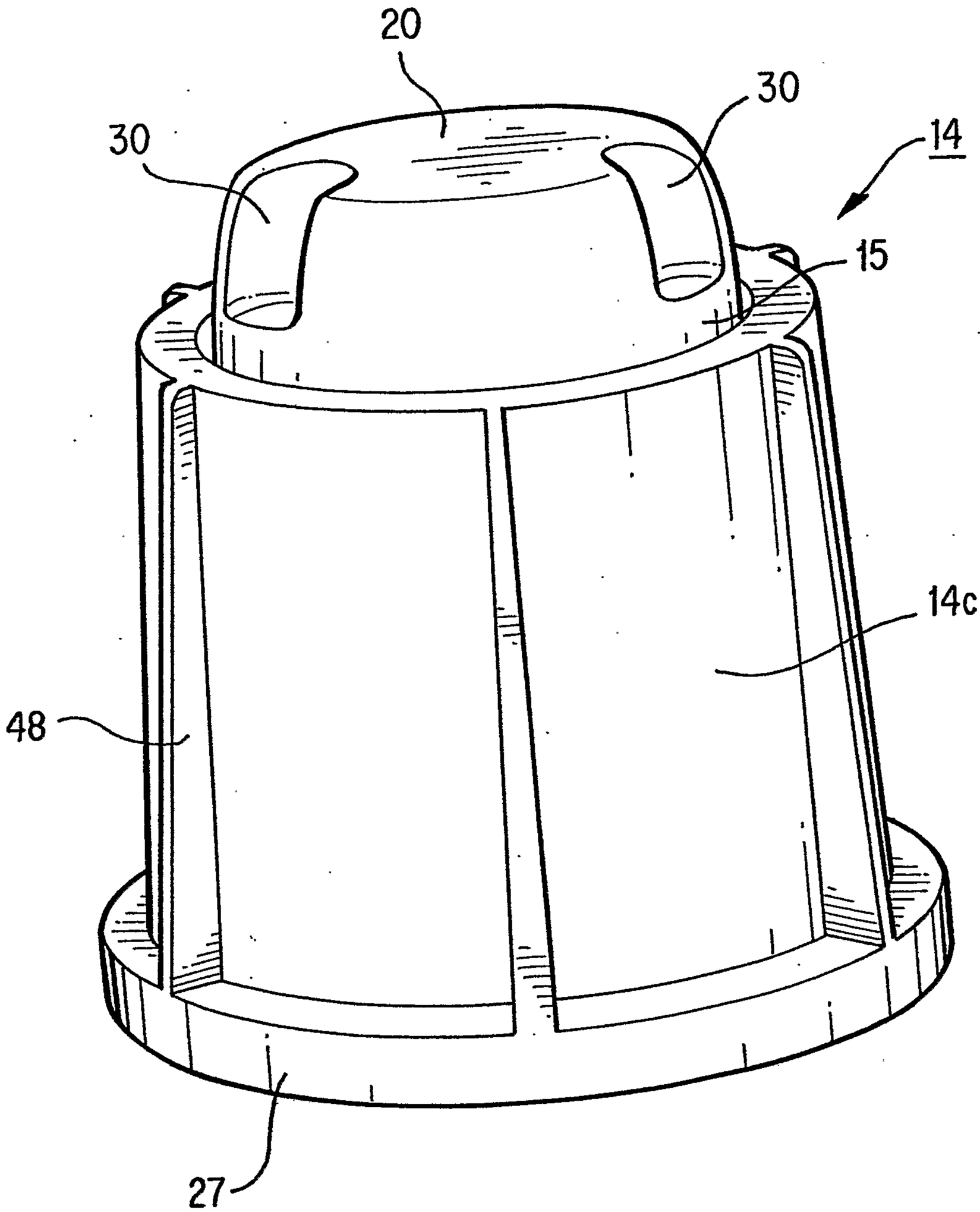

FIG. 3

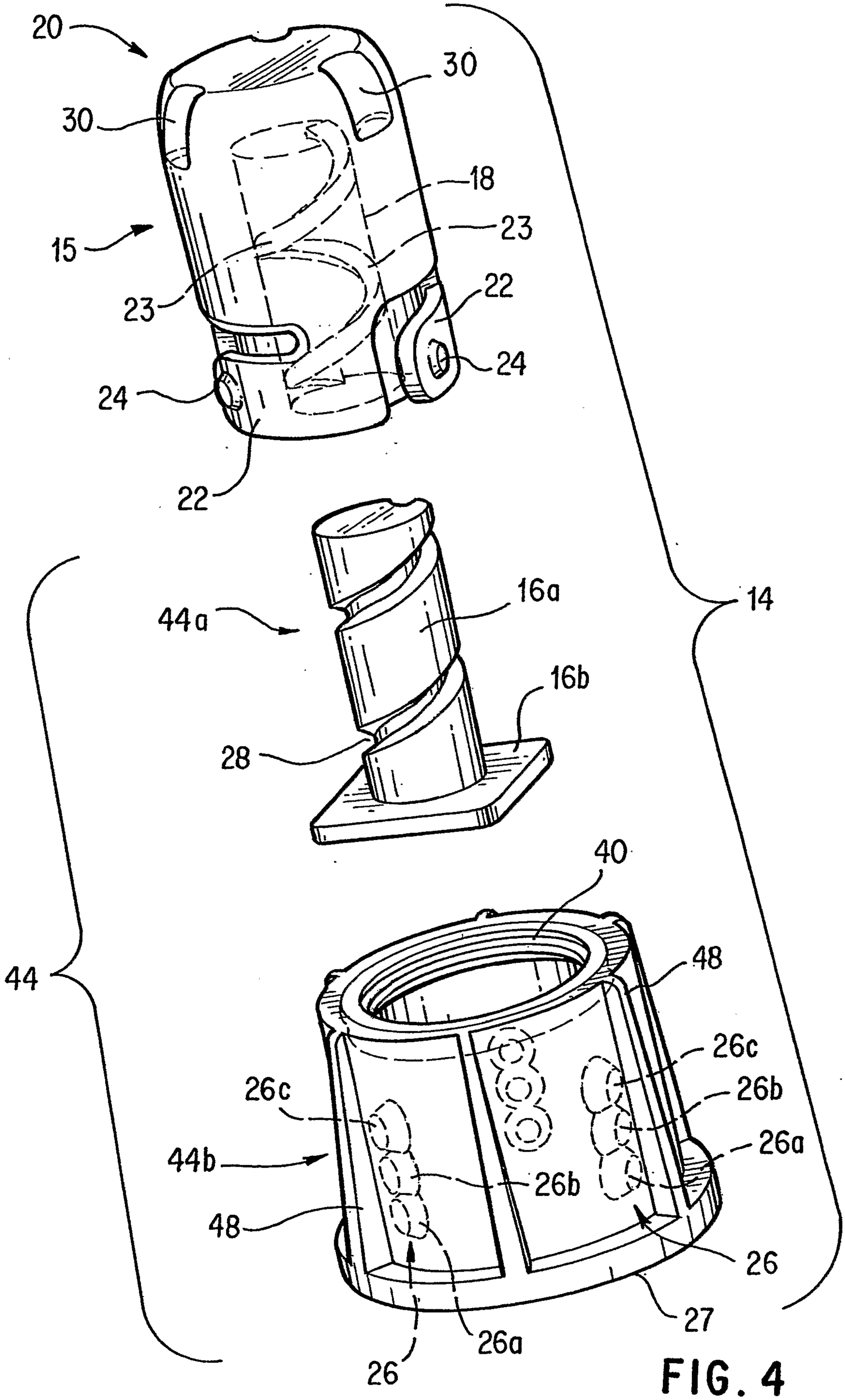
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FIG. 4

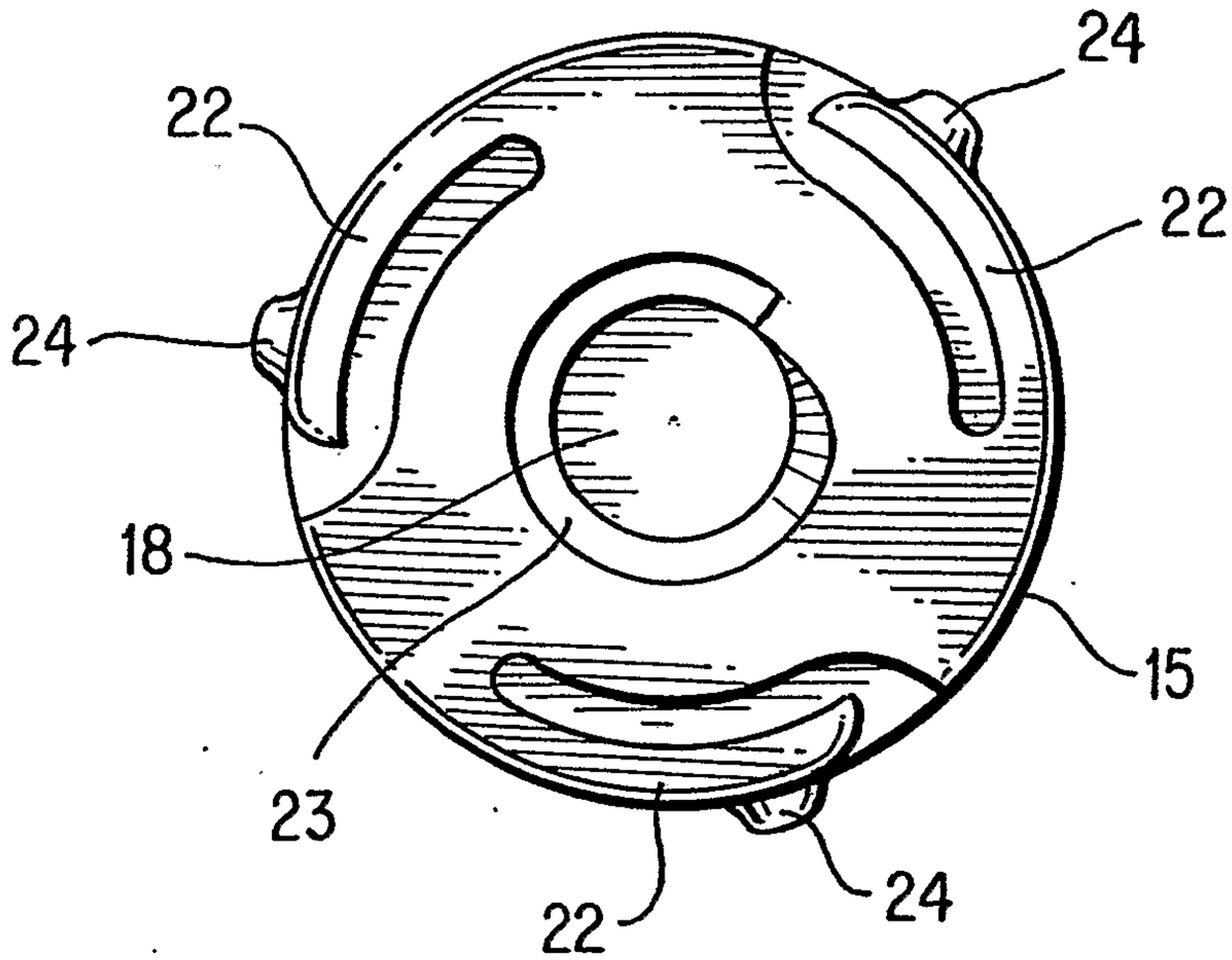


FIG. 5

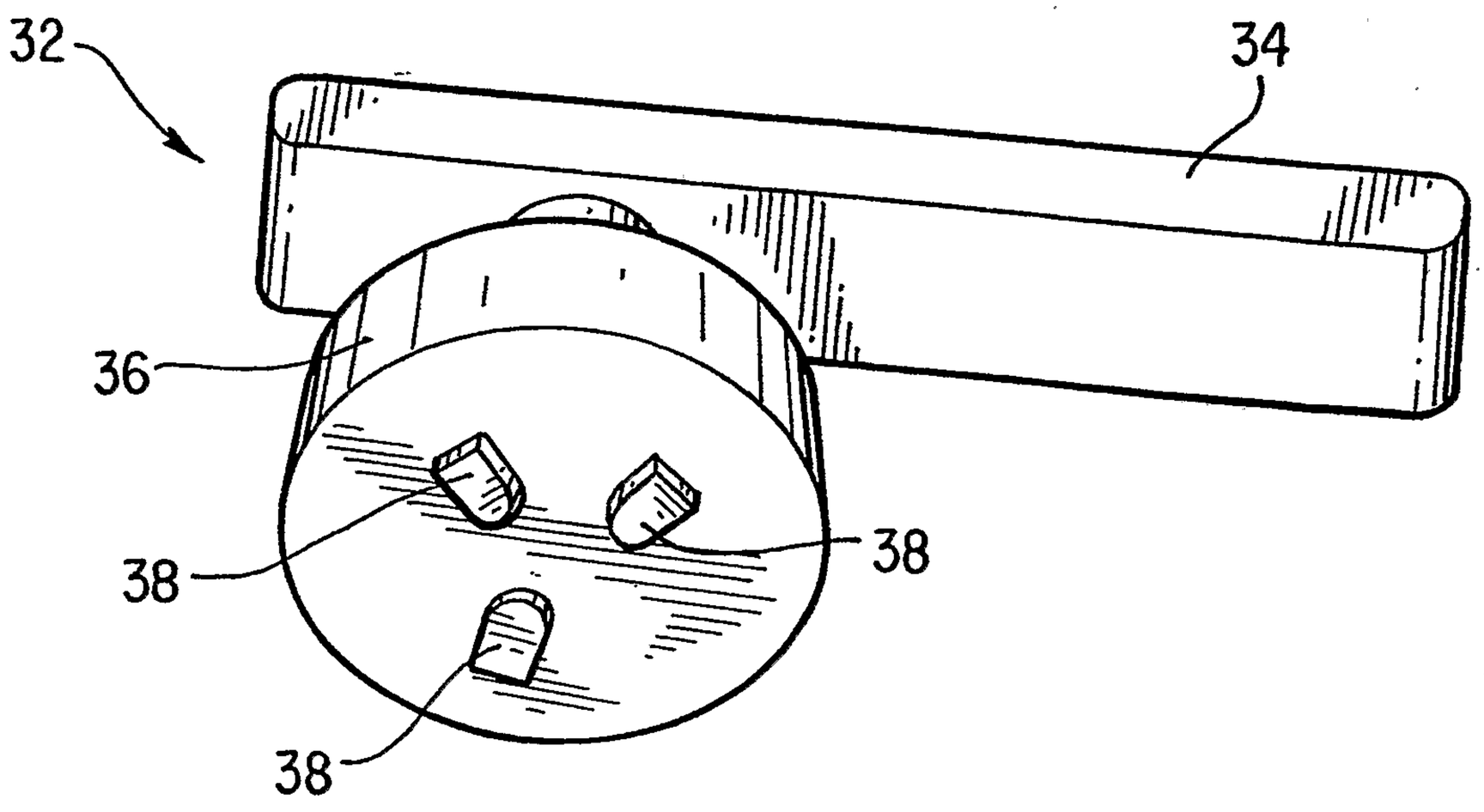
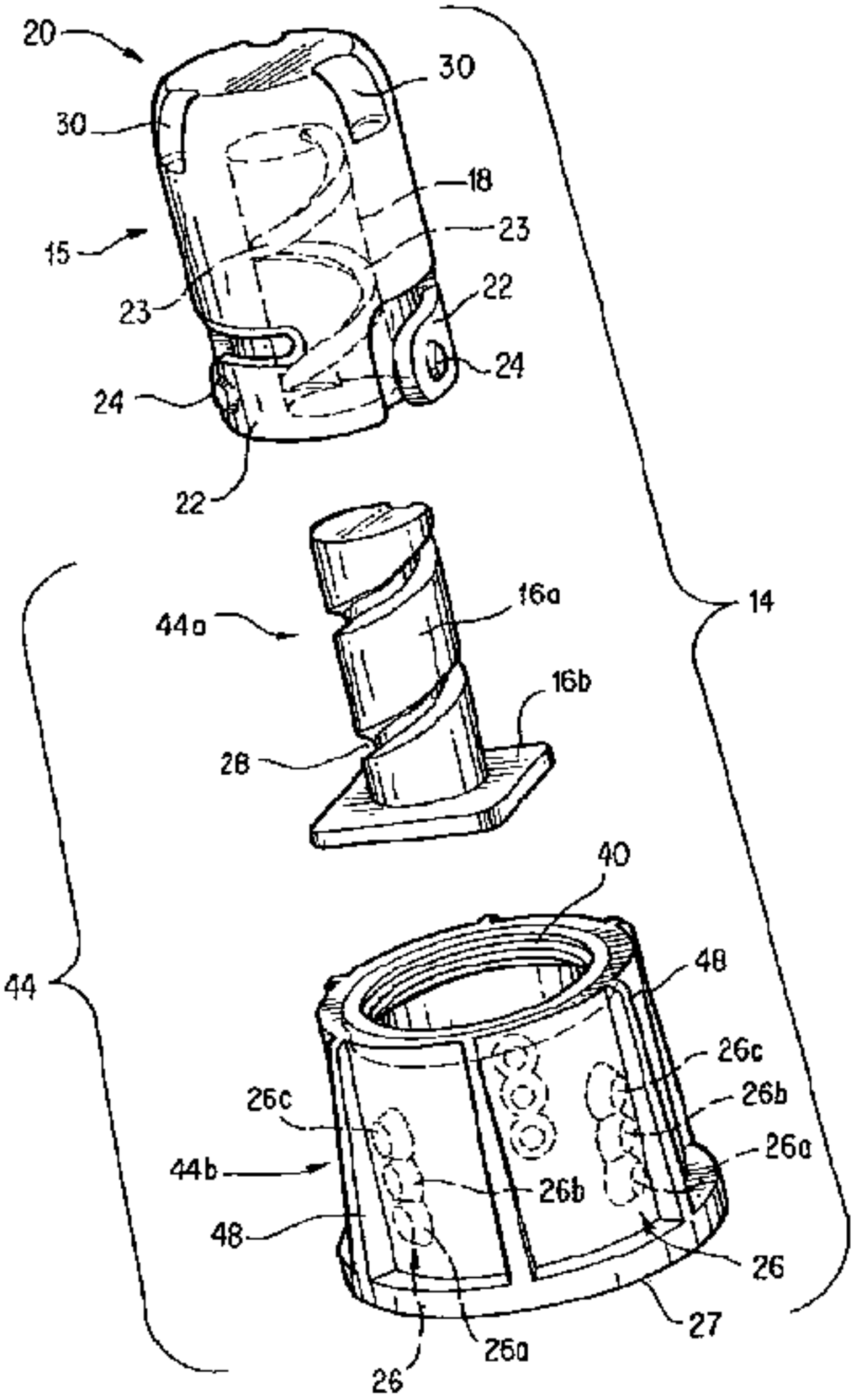


FIG. 6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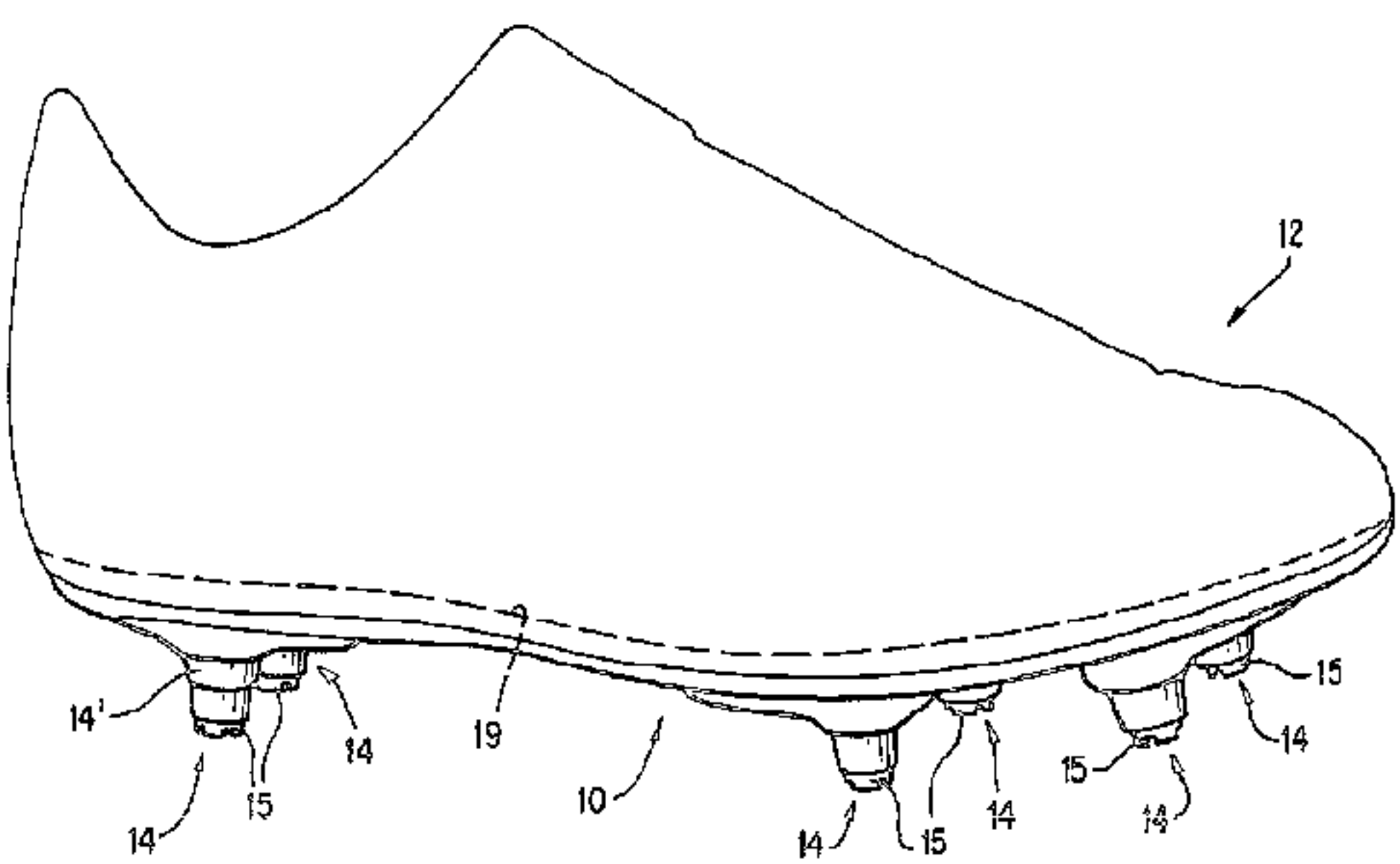
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