**July 12, 1938.** H. B. RING **2,123,437**

SKI POLES AND HIKING STICKS

Filed Nov. 27, 1936

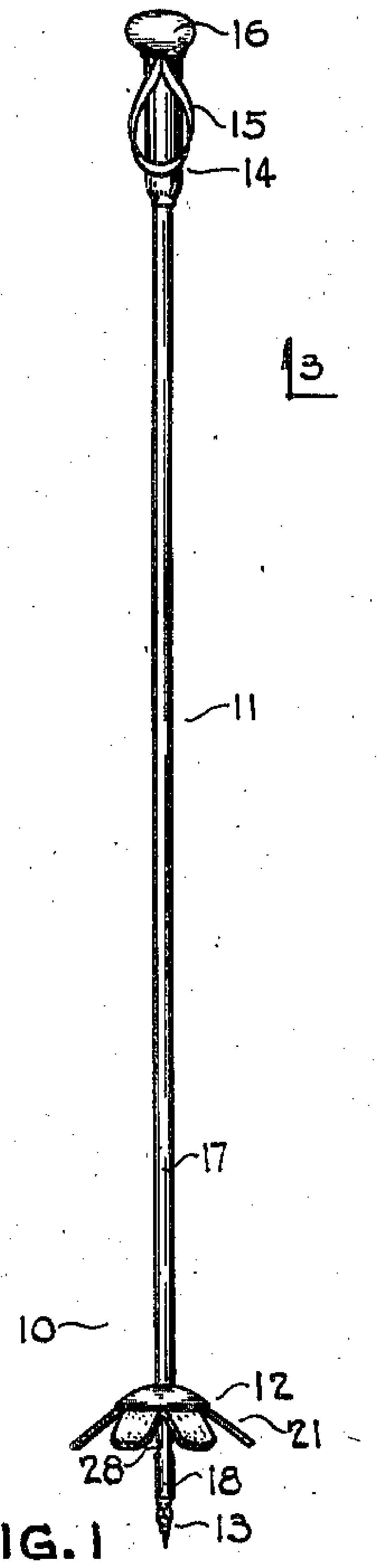

FIG. 1

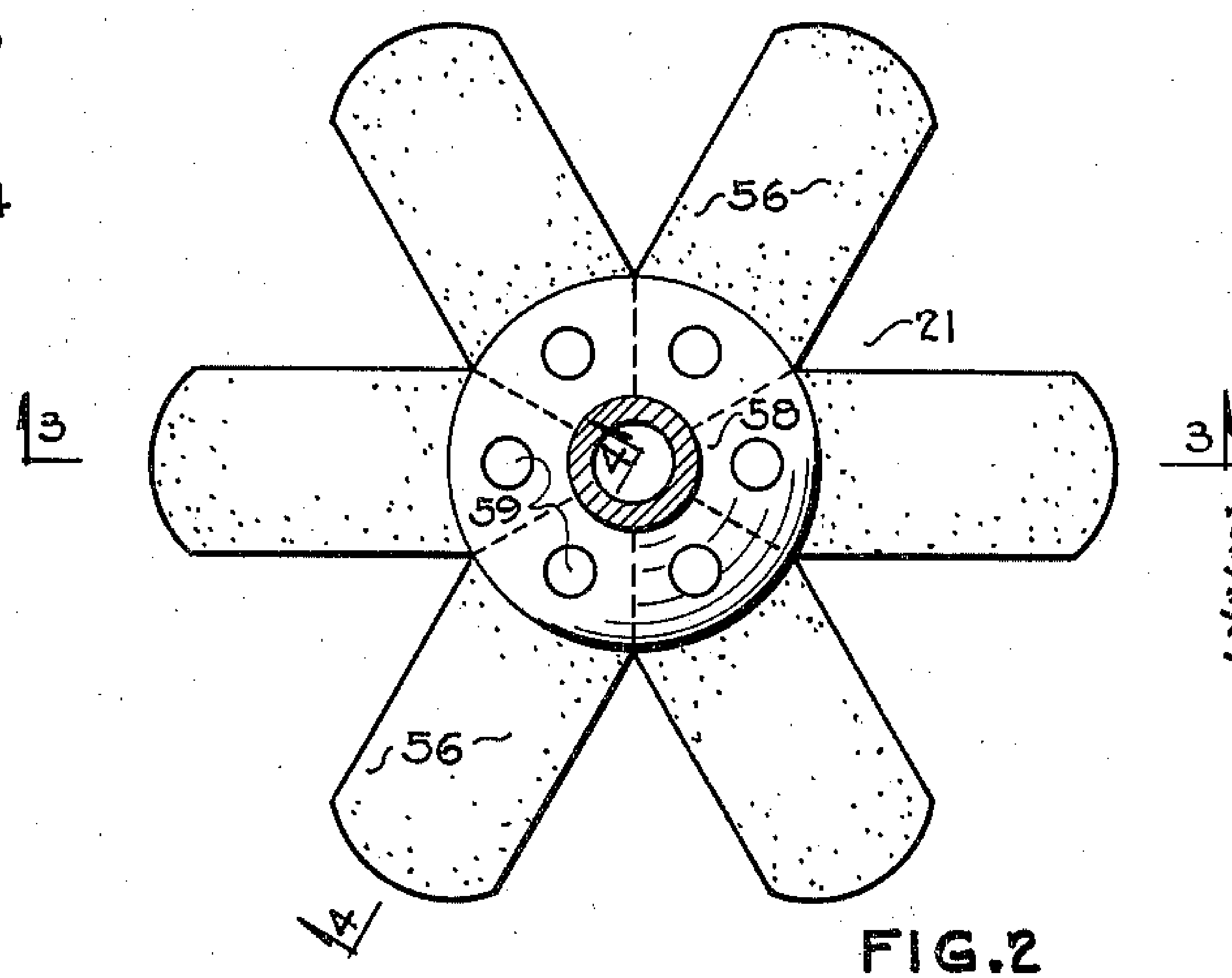

FIG. 2

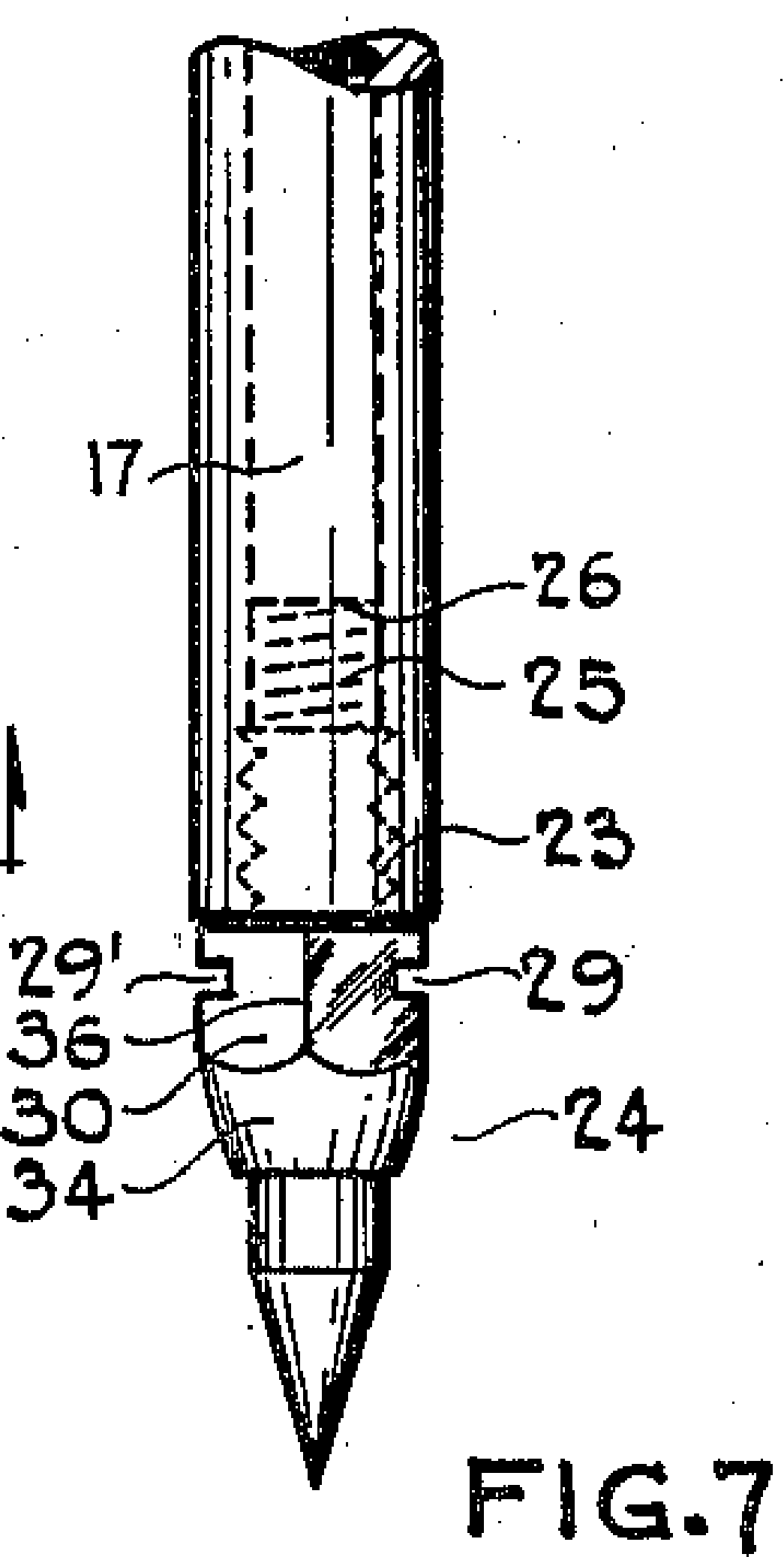

FIG. 7

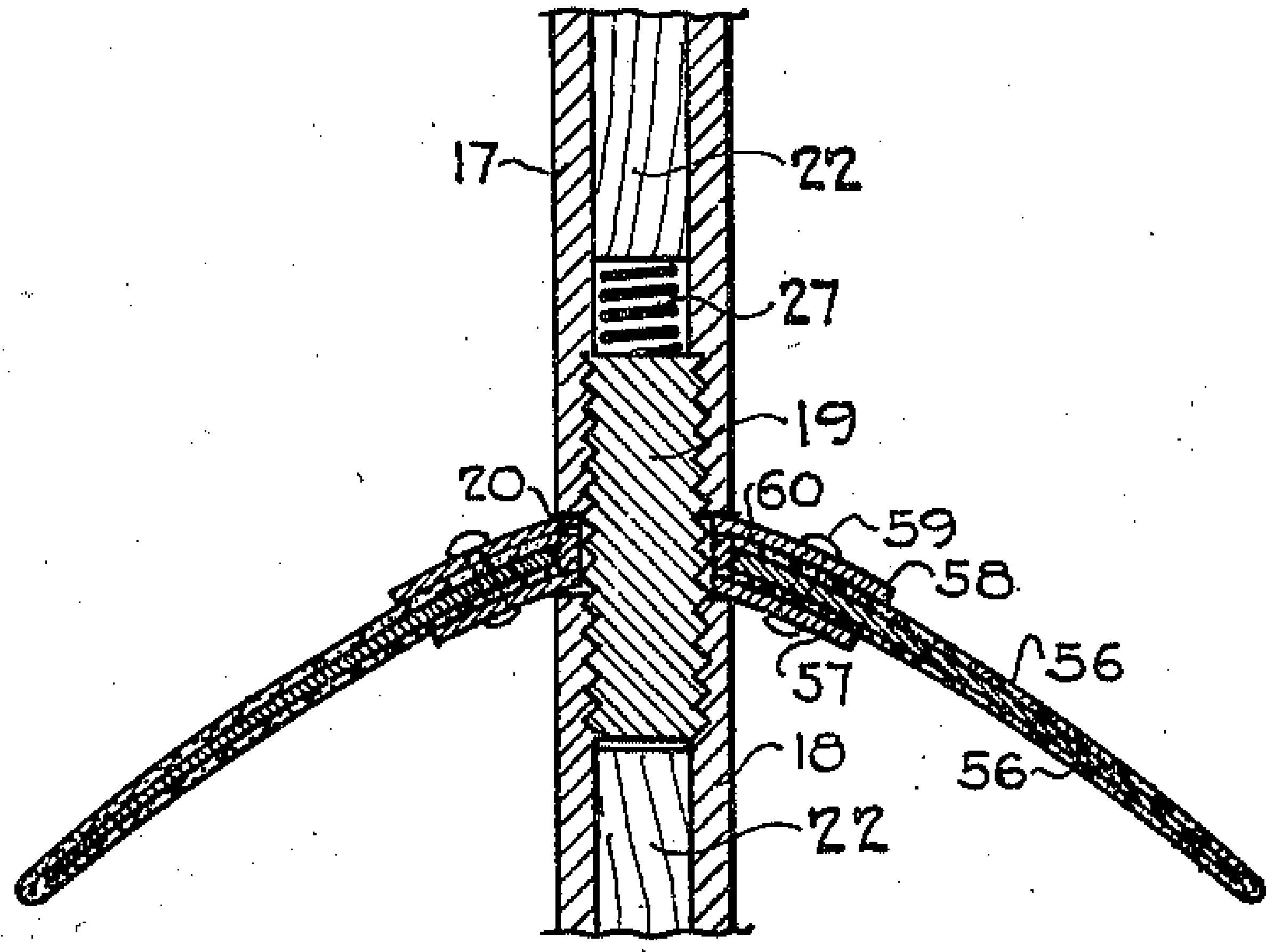

FIG. 3

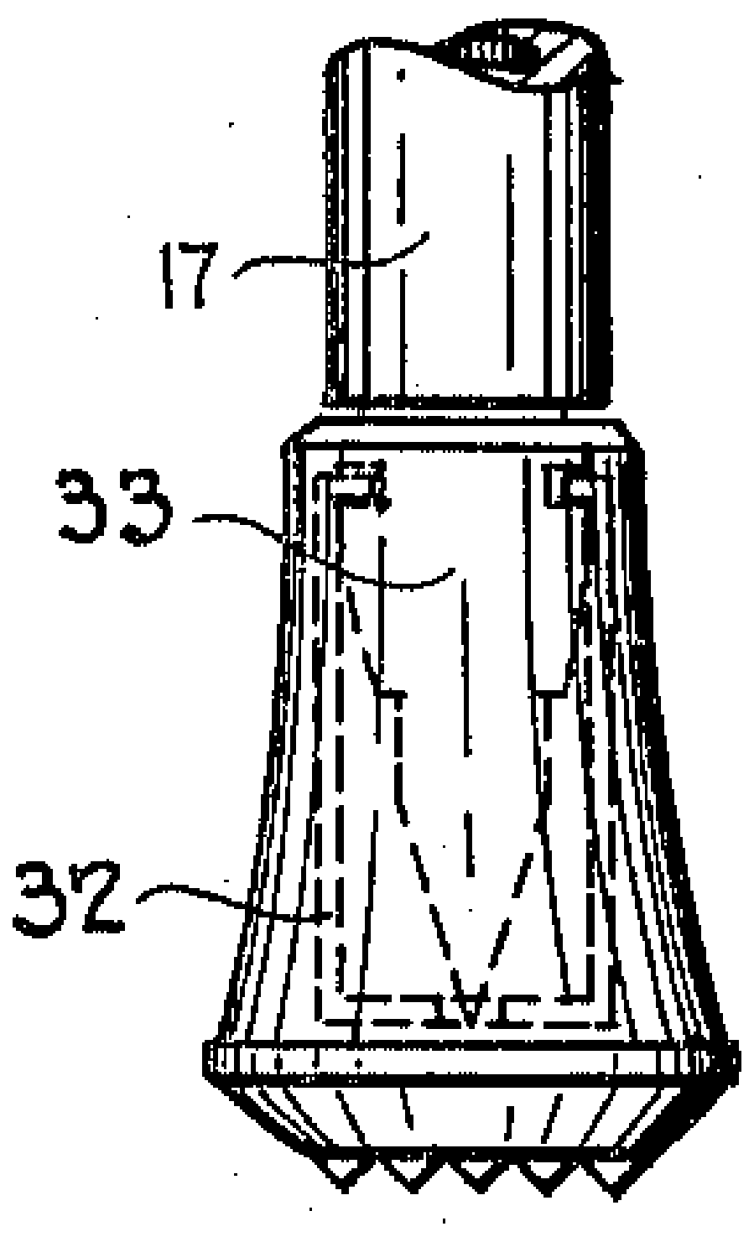

FIG. 8

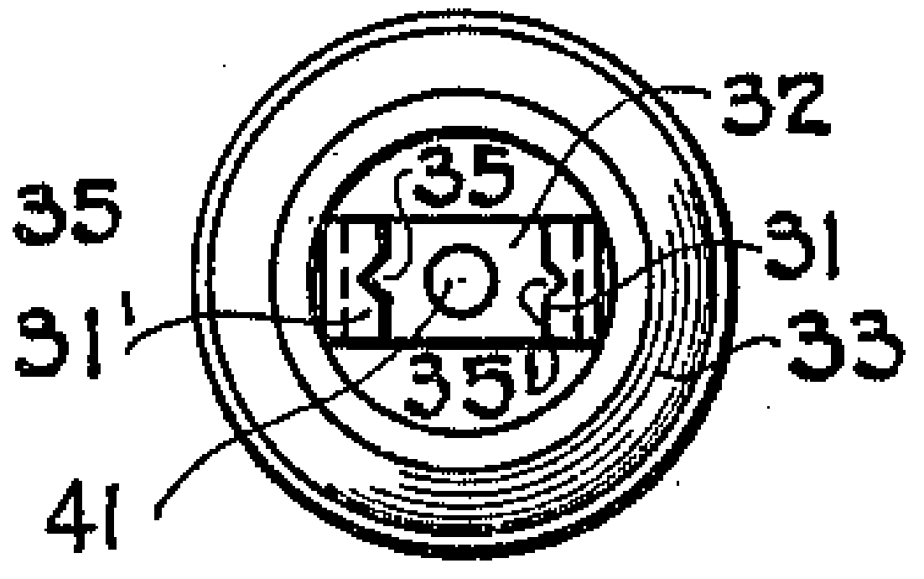

FIG. 9

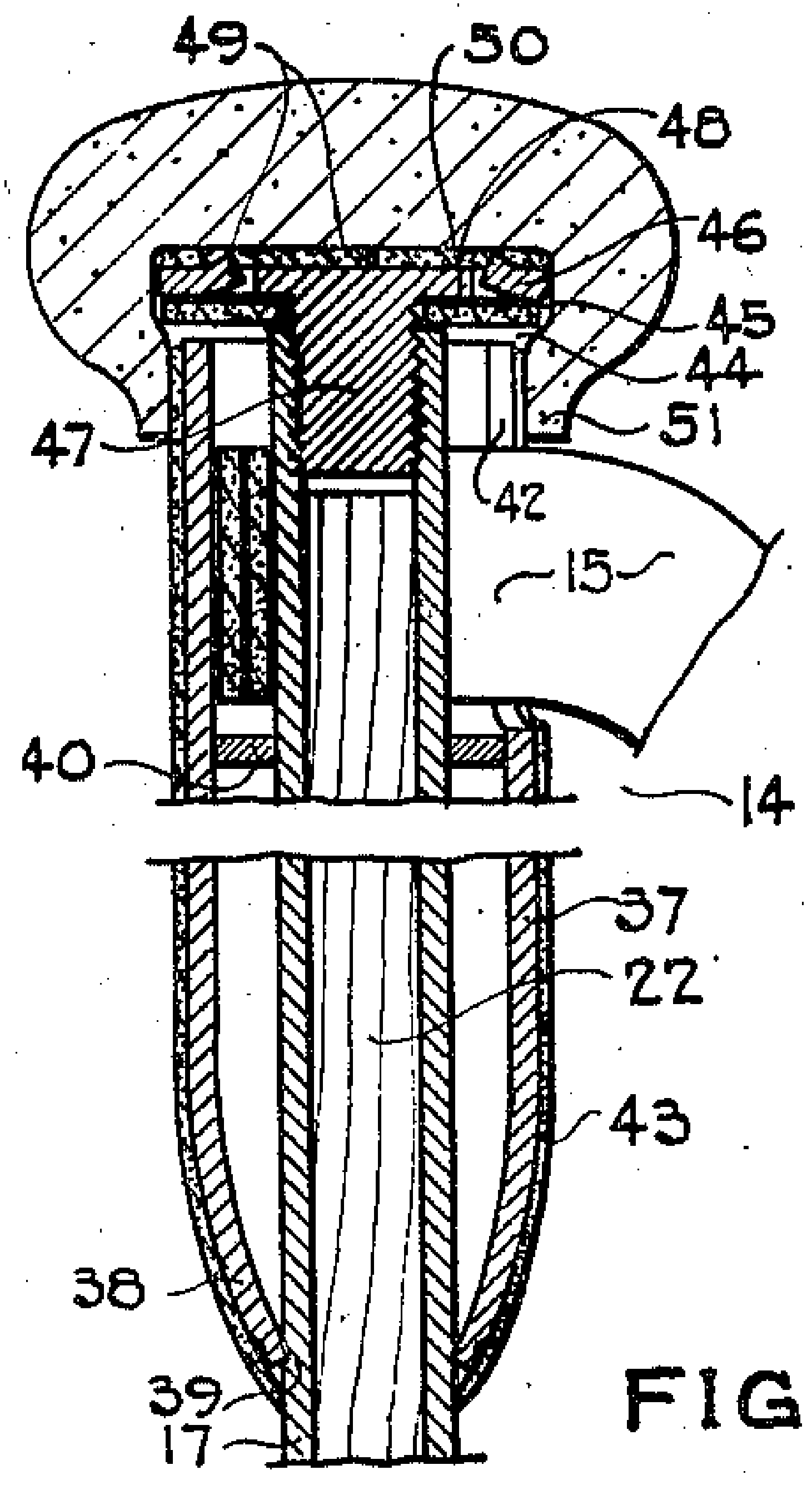

FIG. 5

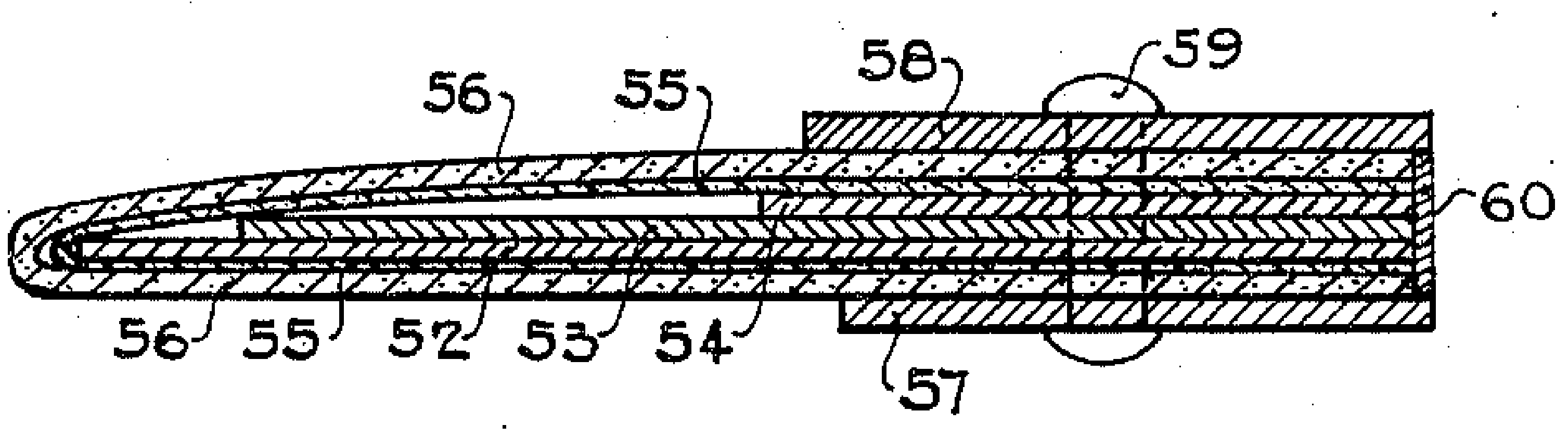

FIG. 4

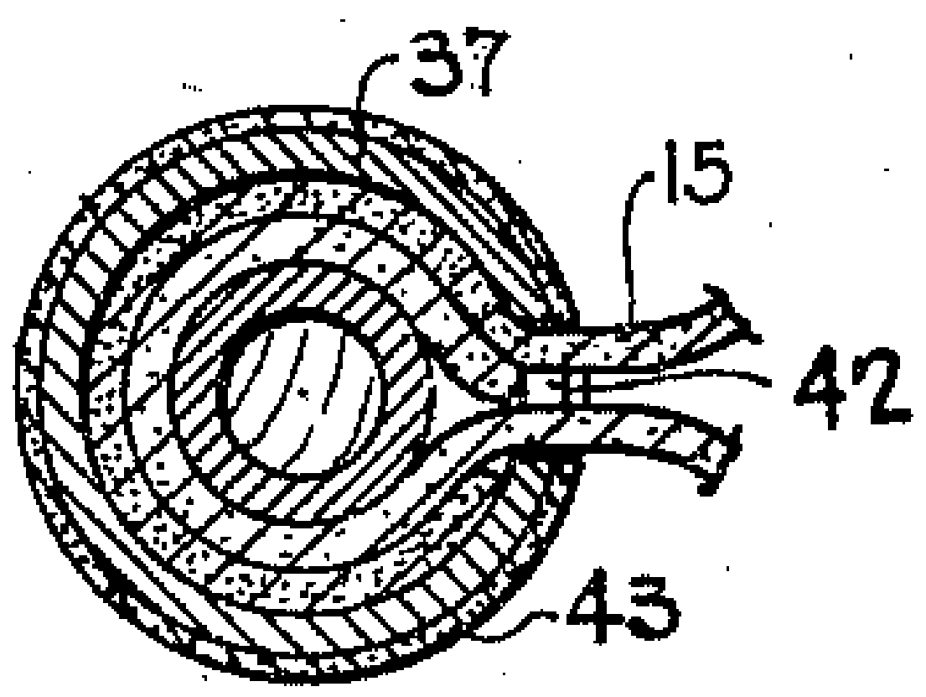

FIG. 6

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Patented July 12, 1938

2,123,437

# UNITED STATES PATENT OFFICE

2,123,437

## SKI POLES AND HIKING STICKS

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Application November 27, 1936, Serial No. 112,868

9 Claims. (Cl. 280—11.37)

This invention relates to new and useful improvements in ski-poles, hiking sticks, and the like, and it has for its special purpose to provide a ski-pole with an entirely novel and removable ring member or disk mounted thereon, in such a manner that said ski-pole may easily and quickly be converted into a useful hiking stick.

Another object of the invention is to the effect that the said ring member or disk, in my new ski-pole may be replaced by a group of elastic leather or rubber fingers embodying a springy steel core, and radiating from the pole to form a star-shaped bearing surface, to which I shall hereinafter refer as fingerspread.

In skiing, especially downhill, a danger is always present, when using the hitherto common ringformed disk, which is likely to be caught in branches, rocks, etc., thereby causing the skier to take an unnecessary spill, this danger is eliminated by the use of my present invention.

A further object of my said invention, as far as it relates to the fingerspread, is that the latter will readily shed the snow which is likely to accumulate thereon, this feature is of great importance, especially in a cross country ski race.

Still another advantage of my novel fingerspread lies in the spring action thereof, which feature is quite important, especially for a longer race, where every ounce of energy and strength count.

Another advantageous feature relative to my new ski-pole is the point protector, which serves several purposes; thus when poles are carried on trains, etc., and not in use, the snap-on rubber protector will protect floors, and rugs from being scratched, or spoiled by said sharp points, and will at the same time protect the points from being damaged on hard concrete roads in case the pole is used as a hiking stick.

Of other advantageous features may be mentioned, the special arrangement of the straps so that no right or left hand pole distinction is necessary; further the possibility of removing or replacing said straps, if desired; and still further the rubber knob, which tends to avoid accidents, when the skier takes a spill at a high speed; and finally the insertion of a wooden core in the pole, which makes the latter practically unbreakable.

With the above and other objects in view, this invention consists of the novel features of construction, combination and arrangement of parts, hereinafter fully described, claimed and illustrated in the accompanying drawing forming part of this application, and in which similar characters of reference indicate corresponding parts in all views, and in which:

Figure 1 is a side elevational view of my new Ringomatic pole used as a ski-pole.

Figure 2 is a top plan view of the fingerspread; while

Figure 3 is a transverse sectional view on the line 3—3 in Figure 2; and

Figure 4 is an enlarged detail sectional view similar to Figure 3, before the finger is pressed into its final shape.

Figure 5 is a longitudinal sectional view through the handle; and

Figure 6 is a transverse sectional view of the same.

Figure 7 is an elevational view of the lower end of the pole, showing the latter converted into a hiking stick.

Figure 8 is an elevational view of the point protector, showing the latter applied to the end of a pole.

Figure 9 is a top plan view of said point protector.

Referring more particularly to the drawing, **10** indicates a pole consisting of a metal tube **11**, a fingerspread **12**, a steel point **13**, an enlarged portion **14**, serving as a handle, a strap **15** secured to said handle, a somewhat ball-shaped knobmember **16**, serving as a protecting means against accidents, and a point protector, shown in the Figures 8 and 9.

The metal tube **11**, which preferably is made of a strong aluminum alloy, noncorroding and nontarnishing, consists of two parts, that is, an upper, and as to length variable section **17**, and a lower short section **18**, of a standard length; said sections are held together by a nipple **19** in such a manner as to leave a short distance **20** between said sections, sufficient for the insertion of the fingerspread between the latter.

The metal tube is except for small portions thereof, as later will be described, filled with a wooden core **22**, thereby making this new pole practically unbreakable.

A steel point **24** is screwed into the lower and inside threaded portion **23** of the lower portion, or section **18**. Said steel point is secured against unscrewing itself during the daily use of the pole, by means of a lockspring **25**, which actuates the steel point **24**, as it has one end **26** thereof secured to the wooden core **22**.

A similar lockspring arrangement will be seen in Figure 3, where the nipple **19**, which by means of small pins, or the like, is made an integral part of the lower tube 18, is actuated by the lockspring 27.

As hereinbefore mentioned, the pole also serves the purpose of a hiking or walking stick, and naturally the fingerspread may easily be removed from the said pole by unscrewing the lower part 18, and removing said fingerspread, whereupon said part 18 is again replaced upon the pole, as may be seen in Figure 7.

A portion of the pole may for this reason be conveniently flattened to fit the same wrench, which may be used in the removal of the point, as seen at 28 in Figure 1.

Two recesses 29 and 29′ are arranged in the hexagonal part 30 of the point 24, and adapted to receive and secure on the latter two lugs 31 and 31′ of a U-shaped spring 32 embodied in a rubber protector 33; the latter being provided with a central depression 41 therein to accommodate the point proper of the member 24.

By forcing the rubber protector upward, the spring will slide on the circular portion 34 of the point 24 and snap into the recesses 29 and 29′. In removing said protector by turning the latter the lugs 31 and 31′ will slide out of the recesses 29 and 29′ and the V-shaped cuts 35 and 35′ will engage the ridge 36 of the hexagonal part of the point, forming a guide for said protector in the removal of the same.

Figure 5 shows clearly the construction of the handle. Thus a larger tube 37 with an inwardly bent lower portion 38 rests in a small recess 39 formed in the tube 17. A metal ring or washer 40 is arranged near the top as a support for the outer tube, and between said tubes a strap 15 is inserted as will especially be seen in the Figures 5 and 6. A slot 42 is provided in said outer tube above the ring 40. A leather cover 43 fits snugly around the outer tube as a protection for the hands, especially in cold weather.

The construction of the knob 16 may especially be seen in Figure 5. Said knob is provided with a cylindrical cut-out portion 44 at the bottom thereof; while a metal plate 46 with a threaded pin 47 forming an integral part therewith, is forced into said recessed opening and secured to the same by means of rubber cement, or the like, as indicated at 48. Small slotted portions 49 in the plate and extending into the rubber cement secure a perfect binding of the parts. A rubber washer 50 is made to cover the plate.

A lockspring arrangement similar to those hereinbefore described may also here be employed. The flanges 51 of the knob will then, when applied, as seen in the Figure 5, cover the edges of the pole, as a protection against accidents.

The construction of the fingerspread is shown in Figure 4. Three springs 52, 53, and 54 of different lengths are covered and secured together by elastic tape, or the like, indicated by 55, and these springs are in turn inserted into a rubber or leather cover 56. The six units, thus described, form one fingerspread, as will especially be seen in Figure 2. Said fingers are placed between two metal plates 57 and 58, and then pressed into the shape shown in the transverse section in Figure 3. Rivets 59 one for each finger will firmly hold said fingers in place, while a metal lug 60, in addition, guards said fingerspread against displacement.

It is obvious that changes may be made in the form, construction and arrangement of the several parts, as shown and described herein, within the scope of the appended claims, without departing from the spirit of the invention, and I do not therefore wish to limit myself to the exact construction and arrangement hereinbefore disclosed.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A device of the class described, comprising a metal tube, a steel point secured to the latter, a snap-on protector adapted to cover the end of said steel point, a removable fingerspread arranged on said tube, an enlarged portion disposed at the top of the tube and serving as a handle, removable straps in connection with said handle, and a somewhat ball-shaped knob secured to the top of the latter.

2. A ski-pole and hiking stick, comprising a tube including two parts, a fingerspread adapted to be mounted between the latter, said fingerspread comprising a plurality of members, each member consisting of three springs of different length, means for securing said springs together, and a cover embracing said springs and means, a lug disposed at the inner end of each member, metal plates adapted to receive said members, and means for securing the members to the metal plates.

3. A device of the class described, comprising a pole consisting of a metal tube and including two parts, a wooden core inserted into said tube, a nipple for securing said two parts together at a suitable distance, and a spring cooperating with said nipple, a fingerspread detachably mounted between said two parts of the tube, a steel point attached to the end of the lower one of the said two parts, and a lockspring connected to the wooden core and cooperating with said steel point, substantially as and for the purpose set forth.

4. A device of the class described, comprising a pole consisting of a metal tube and made of two parts, a wooden core inserted into said metal tube, a nipple for securing said two parts together at a suitable distance, and a spring cooperating with said nipple, a fingerspread detachably mounted between said two parts of the tube, a steel point attached to the end of the lower one of the said two parts, and an enclosure consisting of a rubber hood and a metal spring embedded in the latter, said spring being at its top provided with lugs adapted to engage the upper portion of the steel point, substantially as and for the purpose set forth.

5. In a device as claimed in claim 4, and wherein said upper part of the steel point is of a hexagonal shape, recesses formed in said upper part and adapted to receive the lugs of the spring embedded in the rubber hood, in securing the latter to said steel point.

6. In a device as claimed in claim 4, and wherein the upper part of the steel point is of a hexagonal shape, said lugs being made with V-shaped cut outs therein adapted to slide upon the ridges of said hexagonal parts in removing the hood from the steel point.

7. A device of the class described, comprising a metal tube, a steel point secured to the latter, a snap-on protector adapted to cover the end of said steel point, a removable fingerspread arranged on said tube, an enlarged portion disposed at the top of the tube and serving as a handle, said enlarged portion comprising an outer tube section terminating at its lower end in an inwardly bent portion, the tube proper being formed with a recess therein made to receive the bottom edge of said inwardly bent portion,

a ring arranged upon the tube proper and adapted to support the outer tube section, and a leather cover disposed over said outer tube section, substantially as and for the purpose set forth.

8. A device of the class described, comprising a metal tube, a steel point secured to the latter, a removable fingerspread arranged on said tube, an enlarged portion disposed at the top of the tube and serving as a handle, said enlarged portion comprising an outer tube section terminating at its lower end in an inwardly bent portion, the tube proper being formed with a recess therein made to receive the bottom edge of said inwardly bent portion, a ring arranged upon the tube proper and adapted to support the outer tube section, the latter being formed with a cut-out portion therein, and a strap secured in said cut-out portion, substantially as and for the purpose set forth.

9. A device, as claimed in claim 8, and wherein said tube proper and enlarged portion are provided with a knob at their upper ends, said knob having a cylindrically cut-out portion at the bottom thereof, a metal plate provided with a threaded pin mounted in said cut-out portion, means for securing said parts together, and a rubber washer covering said plate.

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