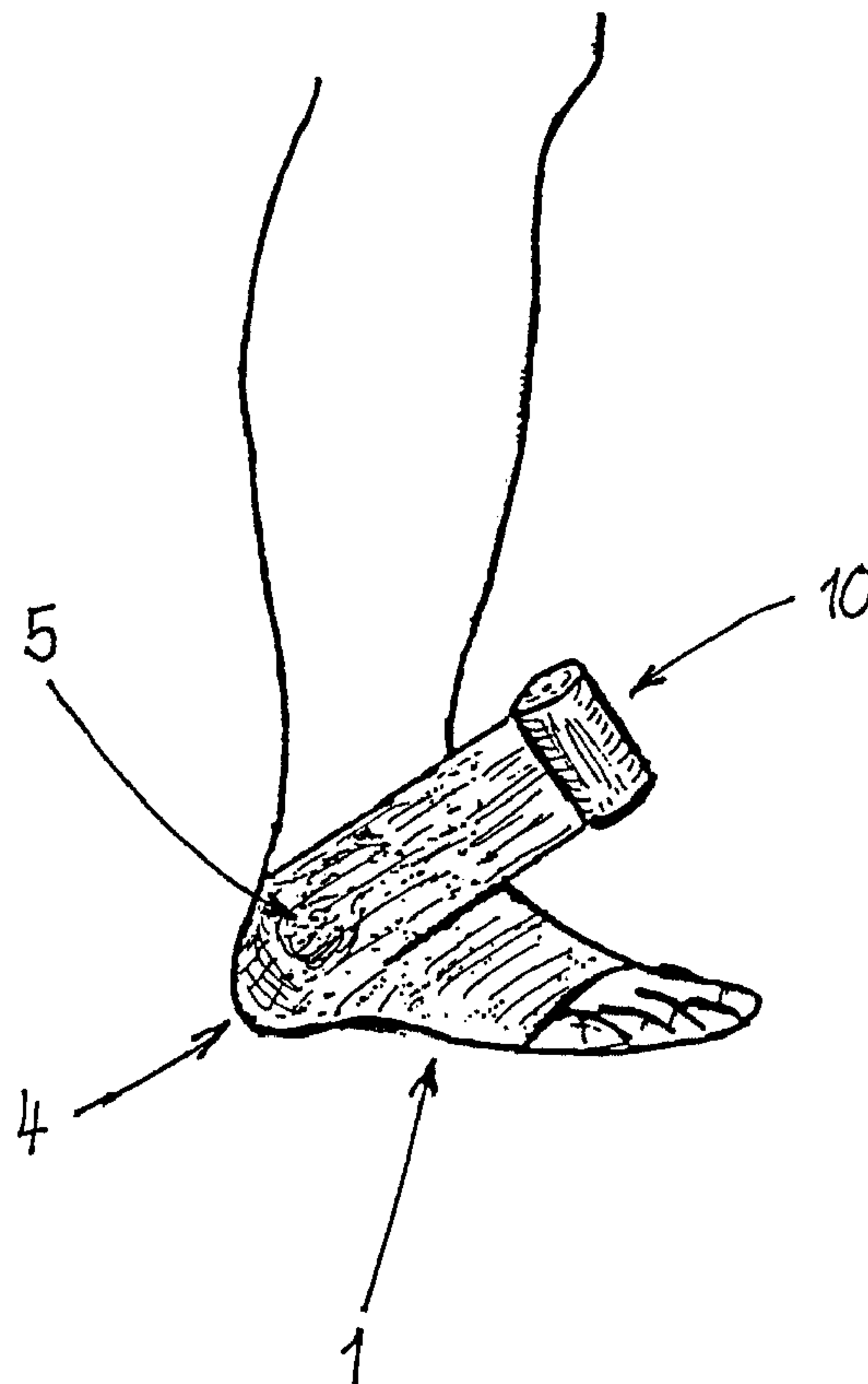




(86) Date de dépôt PCT/PCT Filing Date: 1999/04/19  
(87) Date publication PCT/PCT Publication Date: 1999/11/11  
(45) Date de délivrance/Issue Date: 2006/11/21  
(85) Entrée phase nationale/National Entry: 2000/11/06  
(86) N° demande PCT/PCT Application No.: EP 1999/002608  
(87) N° publication PCT/PCT Publication No.: 1999/056683  
(30) Priorité/Priority: 1998/05/07 (DE298 08 232.2)

(51) Cl.Int./Int.Cl. *A61F 13/08* (2006.01),  
*A61F 13/06* (2006.01)  
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(54) Titre : BANDAGE COMPRESSIF  
(54) Title: COMPRESSION BANDAGE



(57) Abrégé/Abstract:

A compression bandage for supporting the tissue in the area between foot and knee, for example for treating venous and/or lymphatic swellings, is characterized in that it is designed with a ready-made foot part



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**ABSTRACT**

A compression bandage for supporting the tissue in the area between foot and knee, for example for treating venous and/or lymphatic swellings, is characterized in that it is designed with a ready-made foot part

### Compression bandage

The invention relates to a compression bandage for supporting the tissue in the area between foot and knee, for example for treating venous and/or lymphatic swellings.

In the diagnostic indication of venous edema or lymphatic edema, the limb is swollen because of accumulations of fluid. These swellings have to be controlled and gradually eliminated by, among other things, application of a compression bandage, with the circumference of the calf becoming smaller as the swelling reduces. This phenomenon is referred to medically as the acute phase. In this acute phase, treatment with compression dressings is principally recommended. On account of the difficulties which have to be overcome when applying short-stretch compression dressings (for example there must be an exactly definable preliminary tensioning of the stretch compression bandage), the bandage must in most cases be applied by trained personnel or by the doctor, because the winding-on of the bandage is considered too difficult for the patient. Above all, winding the bandage around the front part of the foot and around the heel is considered particularly difficult.

After the swelling of the limb has reduced from the acute phase, a compression stocking is in most cases prescribed in the subsequent maintenance phase. This compression stocking must be tailor-made in about 40% of cases, for which reason the stocking is extremely expensive.

The aforementioned venous and lymphatic disorders are mostly chronic conditions which in some instances have to be treated for life. At present, acute phase and maintenance phase alternate in most patients since,

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particularly in the summer months, or in the event of poor compliance by the patient, the affected limbs swell up considerably for a time. This has the serious disadvantage that the prescribed compression stocking then no longer fits and has to be replaced at least temporarily by a compression dressing which has to be applied by trained personnel.

The object of the invention is to make available an improved compression bandage which, while overcoming the abovementioned disadvantages and difficulties, does not have to be wound around the front of the foot and around the heel and thus puts the patient advantageously in the position of being able to apply the compression bandage independently and therefore also with an individual feel for the compression, at least without medical or specially trained assistance, and in addition the patients require only one product for a wide variety of states of swelling of the limb, both for the acute phase and also for the maintenance phase.

This object is achieved in a compression bandage of the type specified in the preamble of claim 1 by virtue of the fact that it is designed with a ready-made foot part.

The compression bandage according to the invention with ready-made foot part represents an advantageous, readily adjustable combination between compression stocking and compression dressing. Thus, upon application, the difficulty which previously existed when winding the bandage around the front of the foot and around the heel is overcome, these areas being the most difficult areas of the body to bandage. Since the patient, after pulling on the stocking part in the manner of a normal stocking, is now

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able, without medical or specially qualified assistance, to wind the bandage around the rest of the lower leg area between the ankle region and the knee, and to do so independently and with an individually adjusted compression effect, straightforward handling of the compression bandage is advantageously realized, and it can be applied on varying calf circumferences and without help from others. Thus, it is also possible to dispense with application of a compression stocking, and instead the compression bandage according to the invention can be used in all states of swelling and throughout the entire duration of treatment.

In one embodiment, the foot part has a preferably circular-knitted compression middle part with, at one end, an open front without toe inclusion and, at the other end, a knitted-in heel, and a compression bandage, preferably with a length of 3 to 7 m, adjoins the upper edge of the foot part.

It is thus possible for the foot part to end in the area of the ankle, specifically either below or above the latter.

The advantage of the compression bandage according to the invention is that it represents a combination of compression stocking and compression bandage.

The compression bandage according to the invention is applied as follows:

- The foot part is pulled onto the foot in the manner of a stocking,
- The dressing arranged on the foot part is wound on starting at the ankle area, without going around the heel

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again, preferably with half coverage of the dressing turns, spirally or in figures of eight, and ending approximately two finger widths below the hollow of the knee with a circular turn.

Finally, the compression bandage according to the invention can be applied, after the foot part has been pulled on, by winding the bandage twice around the heel and preferably with 1/3 coverage to a point below the hollow of the knee, ending with a circular turn, and with individually adjustable compression tension around the lower leg.

Further details, features and advantages of the invention will emerge from the following explanation of a number of illustrative embodiments represented diagrammatically in the drawings, in which:

Figures 1a through 1f show a human leg in a perspective view, from foot to knee, with a sequence of work phases for application of the compression bandage according to the invention without further winding around the heel;

Figures 2a through 2e show a leg, in a perspective view, with successive work phases for application of the compression bandage with winding around the heel.

Figure 1a shows the foot part of the compression bandage according to the invention with a preferably circular-knitted compression middle part 2 with, at one end, an open front 3 without toe inclusion, and, at the other end, a knitted-in heel 4.

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Subsequent Figures 1b through 1f show that a compression bandage 10 measuring 3 to 7 m in length adjoins the upper edge of the foot part 1.

The foot part 1 ends in the area 5 of the ankle, specifically either below or above the latter, in general preferably above it.

From the views in Figures 1a through 1f, and likewise from Figures 2a through 2e, it is clearly evident that the compression bandage according to the invention is a combination of compression stocking and compression bandage.

The application of the compression bandage according to the invention is extremely straightforward. First, the foot part 1 is pulled onto the foot in the manner of a stocking, as is shown in Figures 1a and 2a. Then, in accordance with subsequent Figures 1b through 1f, the dressing 10 arranged on the foot part 1 is wound on starting at the ankle area 5, and without going around the heel 4 again, preferably with  $\frac{1}{2}$  coverage of the dressing turns, in spiral formation or in figures of eight, and ending approximately two finger widths below the hollow of the knee according to the finished state shown in Figure 1f.

Figures 2a through 2e show a similar procedure for application of the compression bandage according to the invention, which procedure differs solely in that after the foot part 1 has been pulled on, the dressing 10 is wound twice around the heel 4, as can be seen from Figures 2b through 2g. Here, the ankle joint 7 and the area 5 of the ankle are also wound and stabilized, as is necessary for example in the case of weakening of the ankle joint 17

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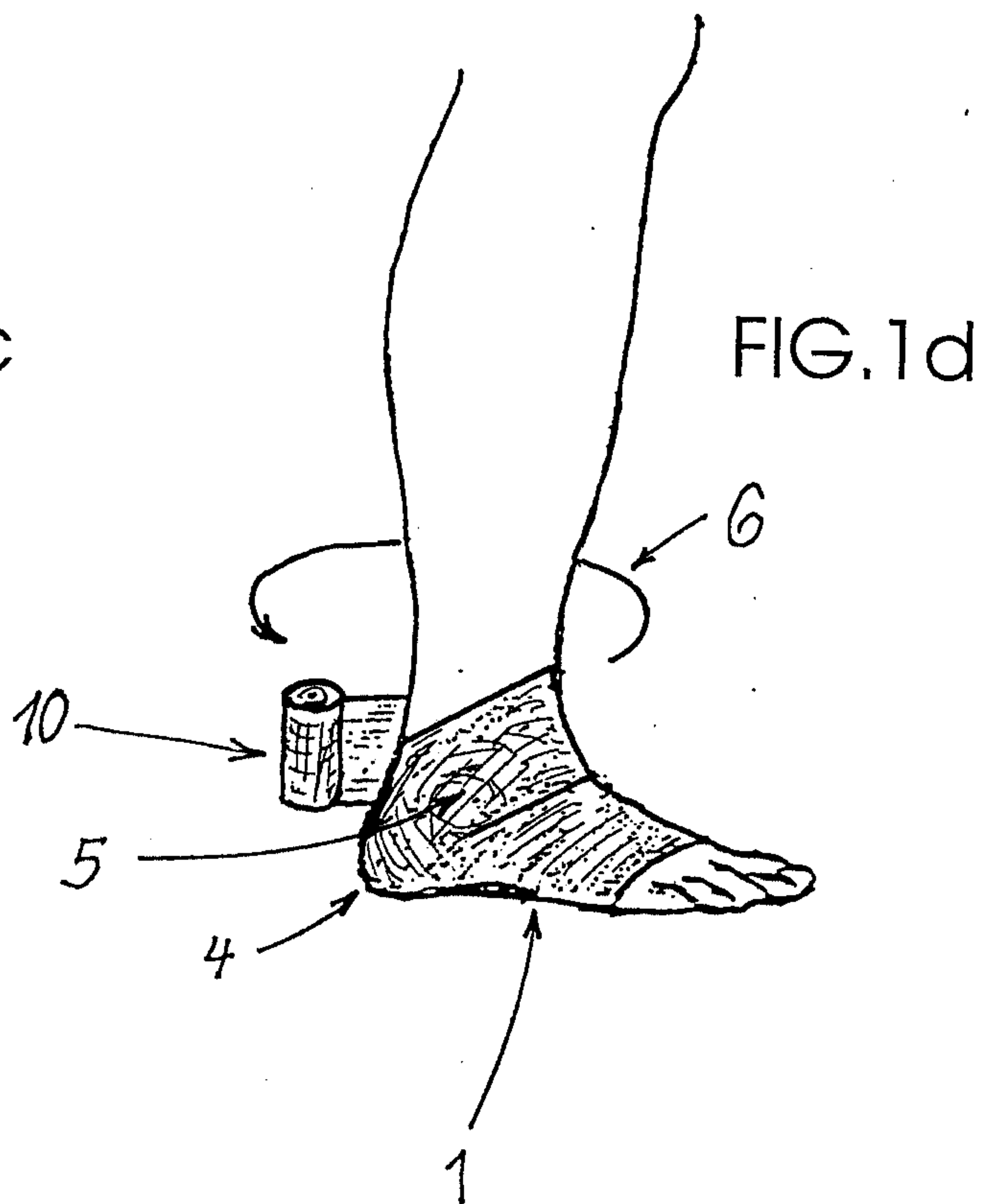
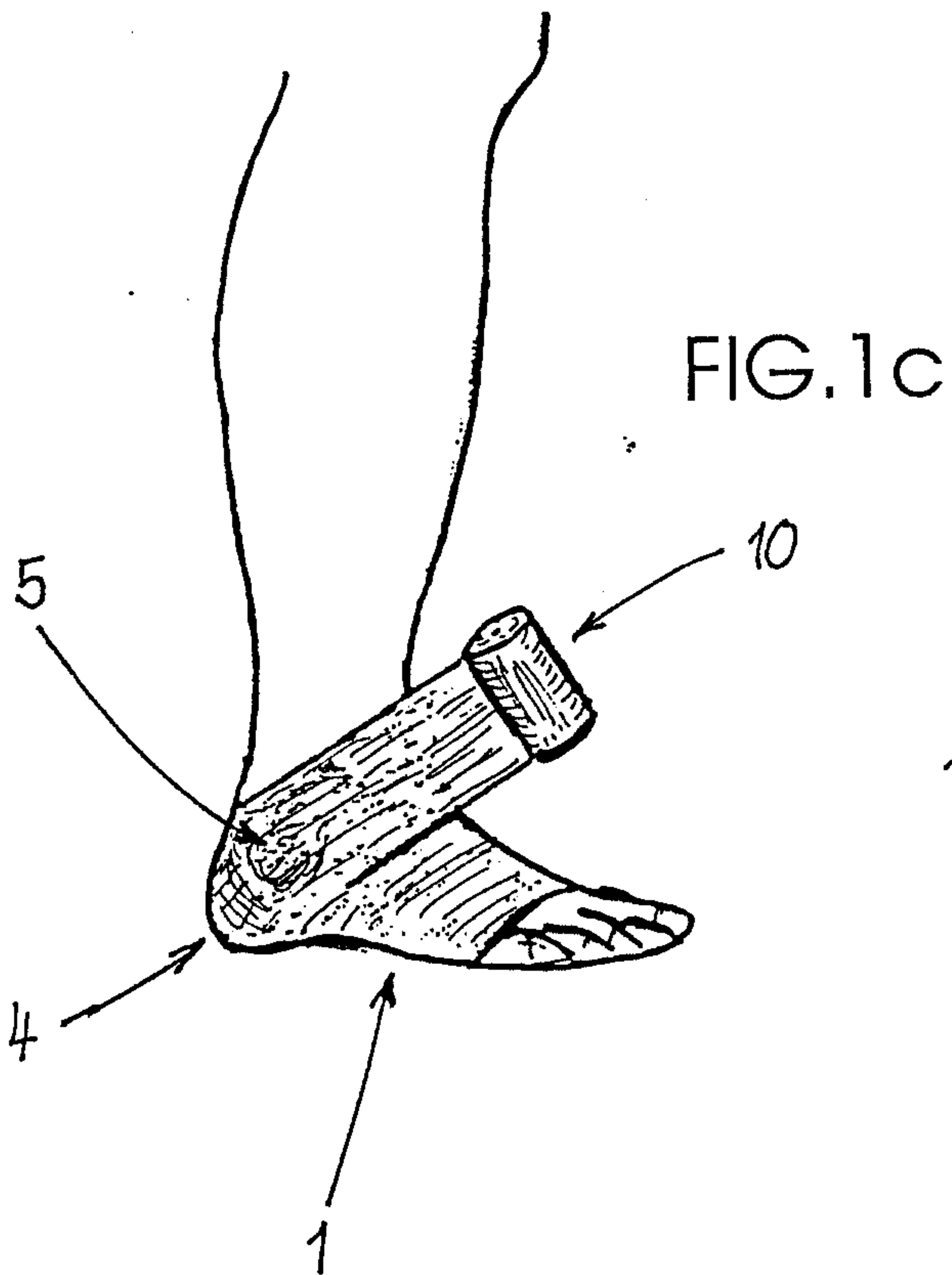
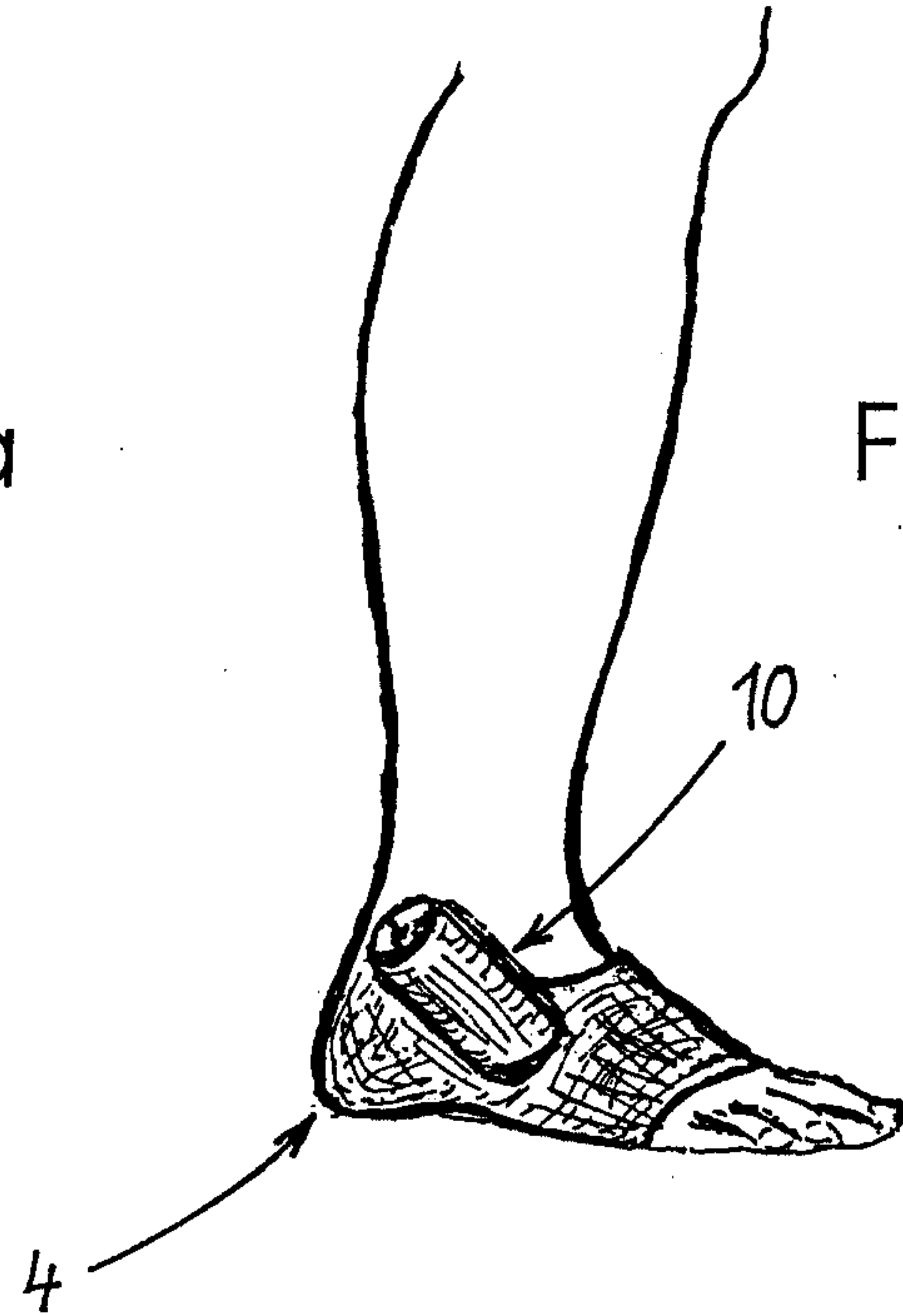
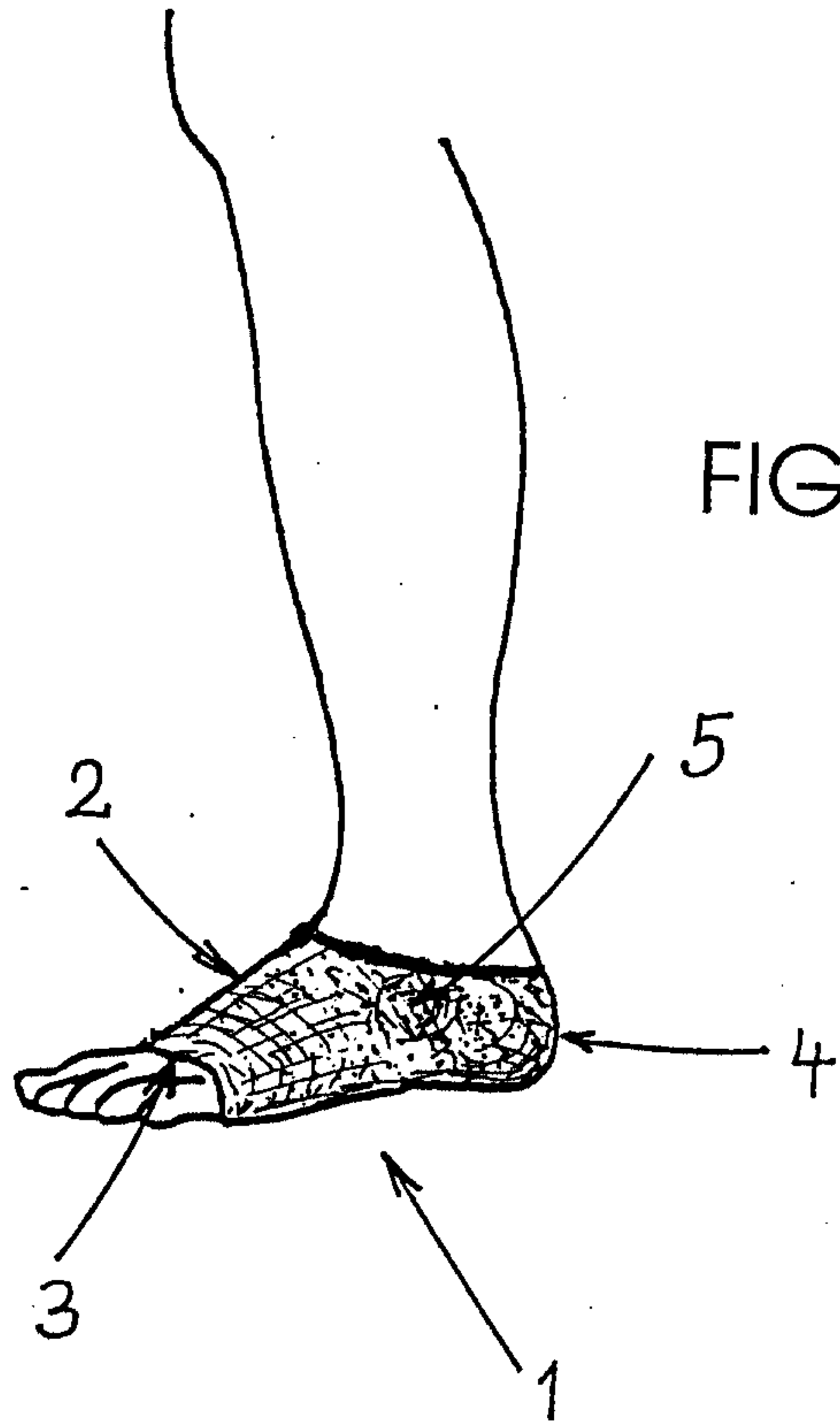
caused by inflammation. Otherwise, the sequence of work phases for application of the compression bandage 10 according to the invention can be seen from the figures without further explanation. The direction 6 for winding the bandage around the leg, according to one aspect of the present invention, is indicated in Figures 1d and 2h. The leg after bandaging has been completed is shown in Figures 1f and 2e respectively.

Because of the straightforward handling on the one hand and because of the versatile use of a single product on the other instead of a previously used compression stocking and compression dressing, and due to its ability to be used even on varying calf circumferences, the invention is of great advantage and additionally results in considerable cost savings both for the patients and for those bearing the costs.

To this extent, the invention optimally achieves the object set out at the start.

**Claims**

1. A compression bandage for supporting the tissue in the area between foot and knee, suitable for treating venous or lymphatic swellings, with a ready-made foot part (1) having an upper edge, and a compression dressing (10) adjoining said upper edge of said foot part, wherein said foot part has a circular-knitted compression middle part (2), and the compression dressing is capable of being wound around the leg in multiple turns.
2. The compression bandage as claimed in claim 1, characterized in that the foot part (1) has a knitted-in heel at one end thereof, and an open front (3) at the opposite end thereof, the open front permitting passage of toes therethrough.
3. The compression bandage as claimed in claim 1 or 2, characterized in that the foot part (1) ends in the area (5) of the ankle, specifically below or above the latter.
4. The compression bandage according to any one of claims 1 to 3 wherein the compression dressing has a length of 3 to 7 meters.
5. Use of the compression bandage according to any one of claims 1 to 4 in the treatment of venous leg swelling.
6. Use of the compression bandage according to any one of claims 1 to 4 in the treatment of lymphatic leg swelling.



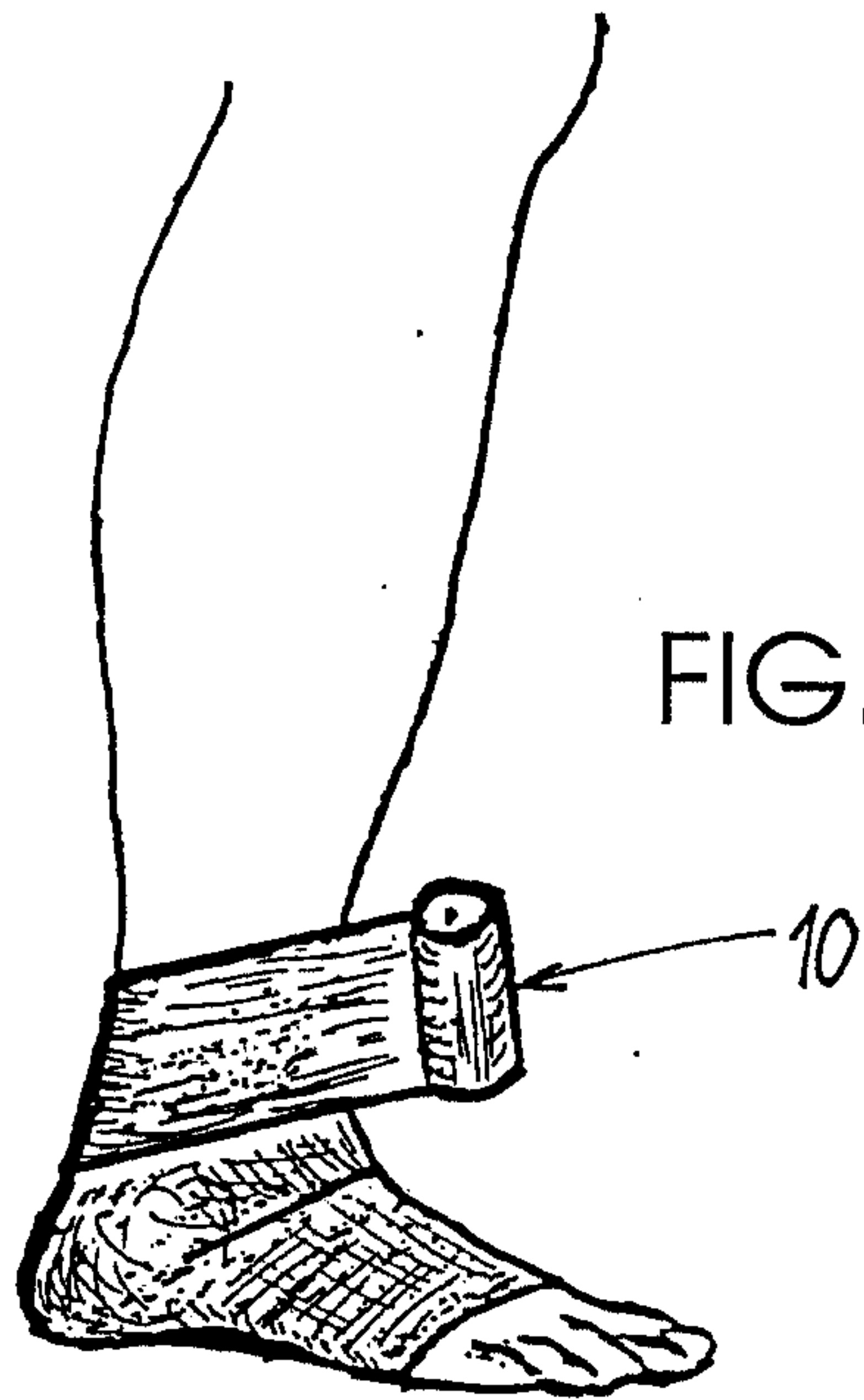


FIG. 1e

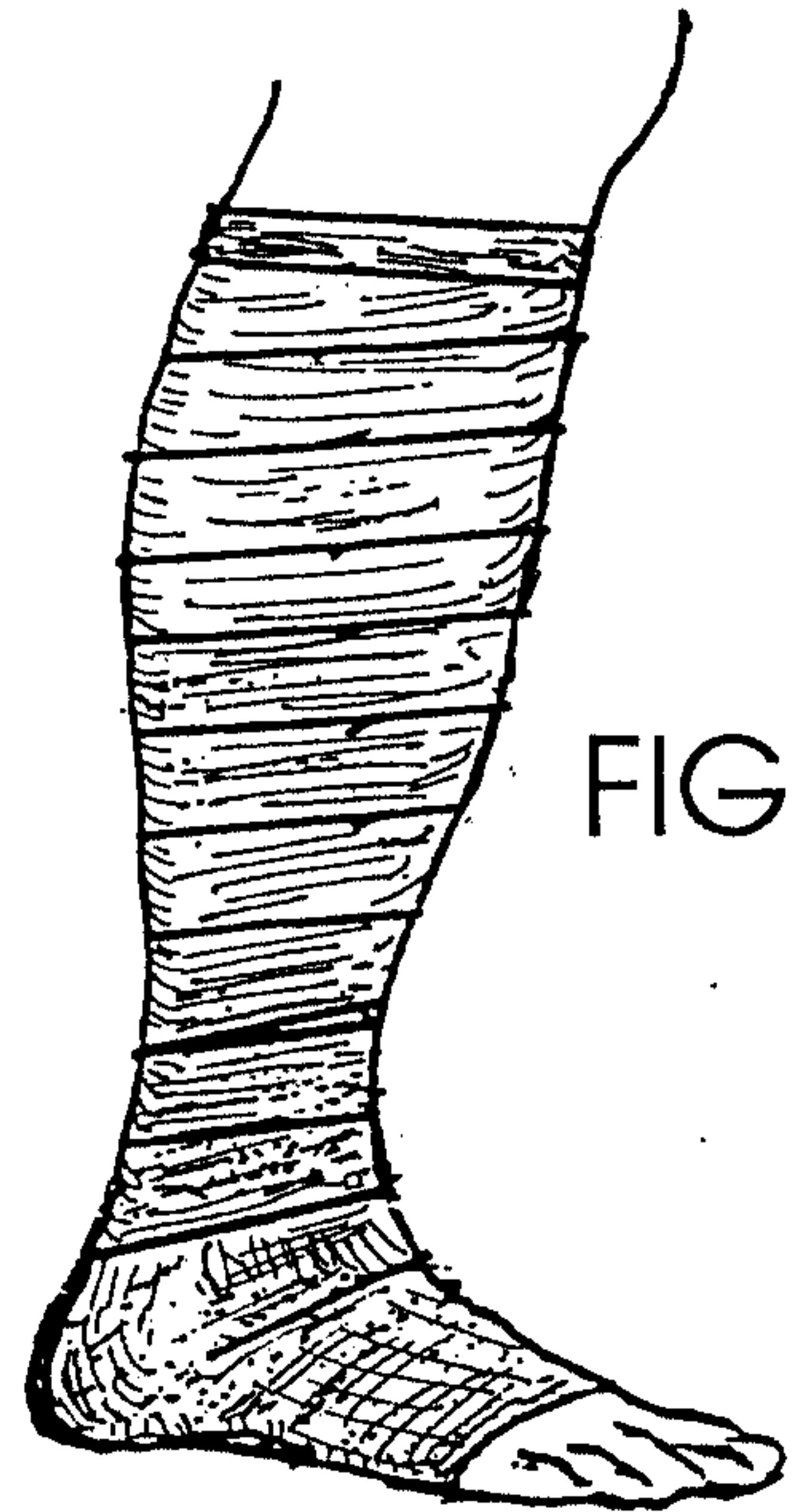


FIG. 1f

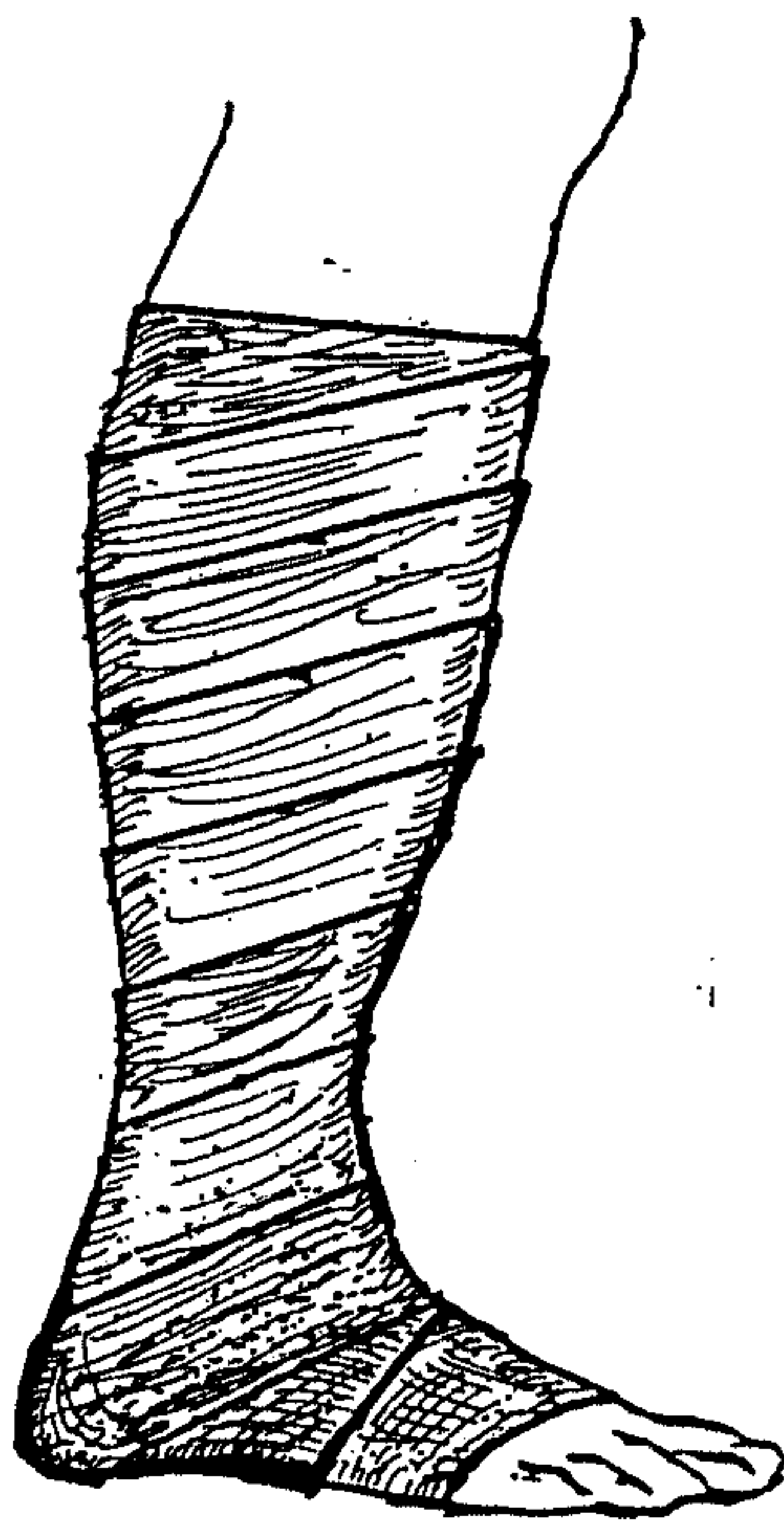


FIG. 2i

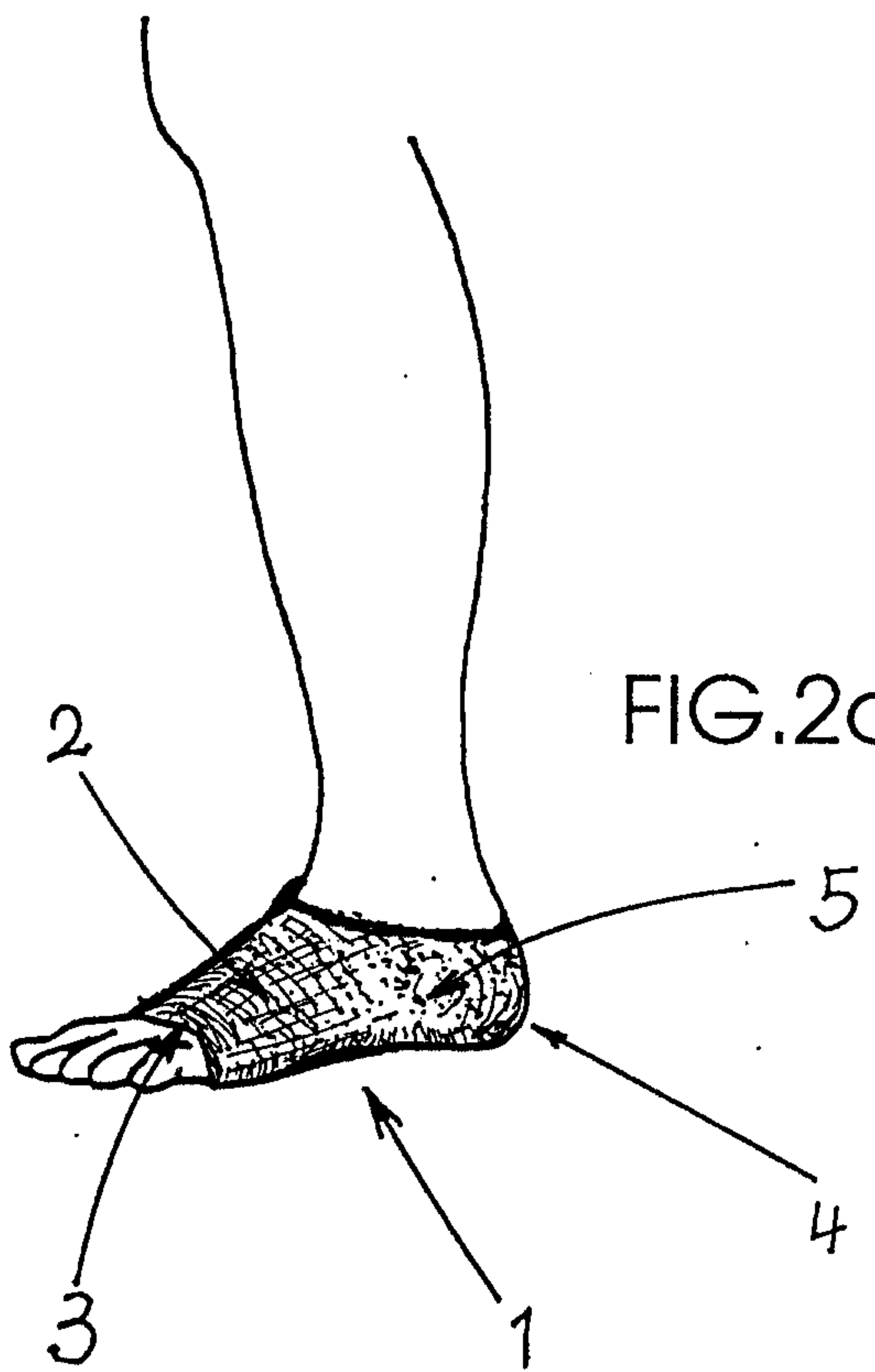


FIG. 2a

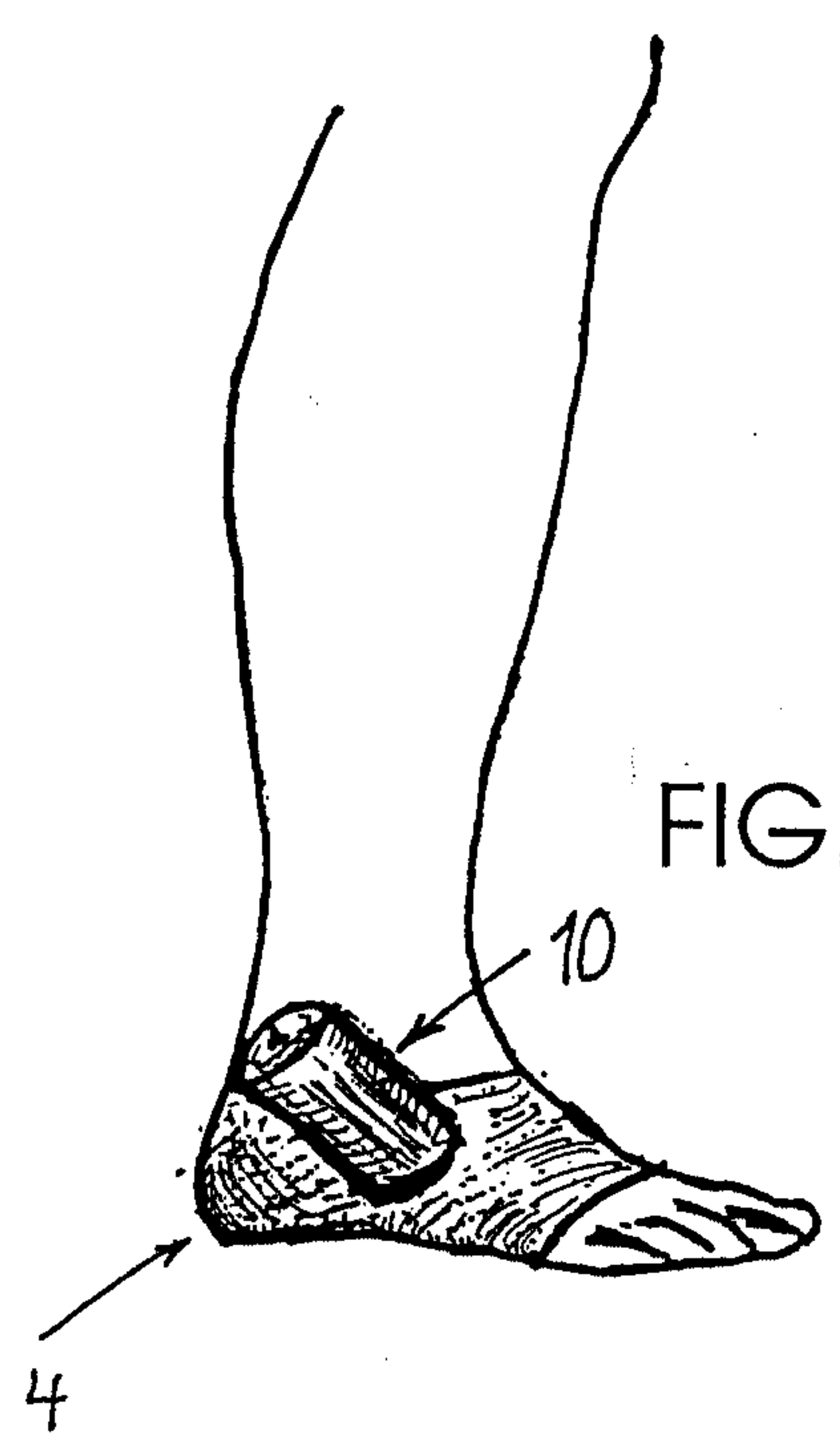


FIG. 2b

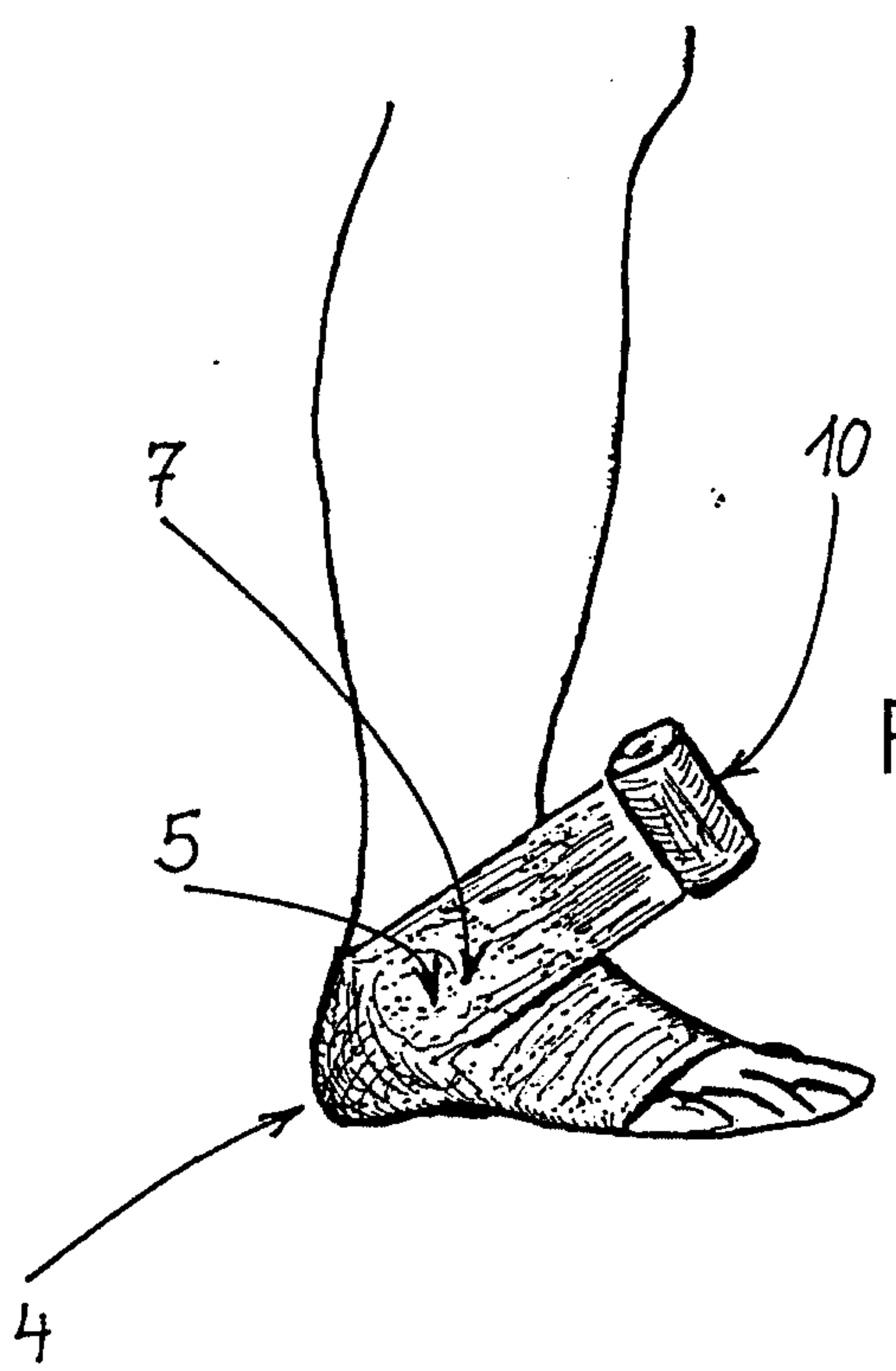


FIG. 2c

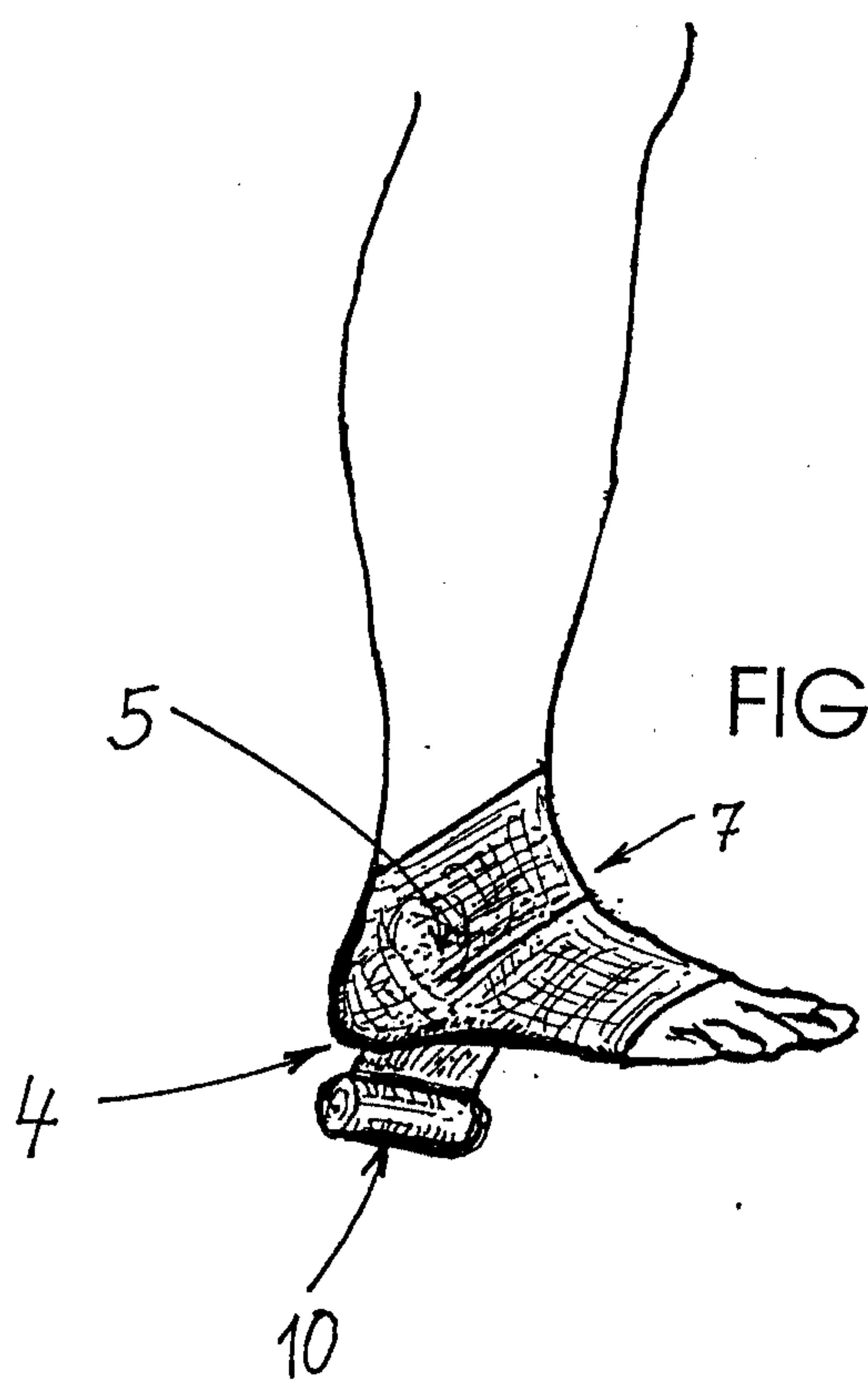


FIG. 2d

