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(54) An articulated pole for skiing tracks which has an out-of-ground part made of a soft material.

(57) An articulated pole for skiing tracks is described which has an out-of-ground pole part (3) consisting of a tube comprising a rigid pole section (4) connected to an articulated joint (2); inserted within an upper portion of this rigid tube section is a connection piece (5) which also is tubular in shape and has the upper part (7) of the pole, which is made of a soft material, fitted thereto.

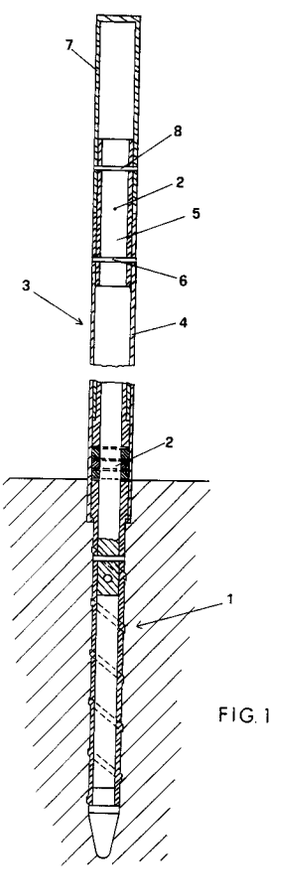

FIG. 1

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This invention relates to an articulated pole, particularly for use on skiing tracks, in which an out-of-ground part of the pole is made, for a substantial portion thereof, from a soft material.

More particularly, this pole includes a pole tip for driving into the ground, an articulated joint connecting said pole tip to an out-of-ground part of the pole, and a pole body fastened to said articulated joint and made at least in part of a soft material.

Due to the particular construction of the pole parts, the pole of this invention, besides offering advantages derived from the lightness and deformability properties of its out-of-ground part, is simple to mount and low in production cost.

Articulated poles have been successfully, and are more and more widely, used in that they provide considerable safety as compared with previously used rigid poles, and, thus, are an aid in both improving regularity of ski races and enhancing spectacularity of these events.

Prior art articulated poles as described, for example, in U.S. Patent N. 4,491,438, include a pole tip for driving into ground, which is connected through an elastic articulated joint to an out-of-ground pole member formed by a tube of a rigid, generally plastic material.

Provided adjacent to the articulated joint are elastic return means, for example, spring means or a core of elastic material, for causing the pole to return to its vertical position.

Though this solution provided substantial improvements to prior art technique, it has however not solved all of the problems inherent in the use of these posts, and this also in that agonistic techniques recently adopted by athletes during ski races exasperate the aggressive manner they come in front of, and pull down the slalom poles, thus creating further problems due to stiffness of these poles.

Due to this stiffness it may, in fact, happen that either the skis are broken as a result of impact, or the pole itself is damaged because of the rigid tube directly transferring all of the vibrations from ground impact to the joint mechanism thereby subjecting it to high stresses.

In view of the above reasons, a need is felt in this connection for means that permit these problems to be overcome and, to this end, the invention provides a ski pole which is of the above described type but which has an out-of-ground part almost entirely made of a soft material.

The invention will now be described in more details by way of a non restrictive example shown in the accompanying drawing, wherein :

Figure 1 is a sectional view of a pole according to the invention with the pole being fitted in the ground;

Figure 2 is a detail view of another embodiment of a pole according to the invention.

Referring to the above figures, it can be seen that a pole according to the invention includes a pole tip, broadly indicated by 1, figure 1, which is made of a hard material suitable for driving the pole into ground, this pole tip being connected through an elastic joint 2 to an out-of-ground part of the pole which is indicated by reference numeral 3.

According to International Regulations, no element protruding out of the diameter of a pole tube may be provided in the out-of-ground part of the pole.

This out-of-ground pole part, comprises a first tubular section 4 of a rigidi material in an upper part of which section there is inserted a connection piece 5 which also is preferably tubular in shape and is locked in place by means of a pin 6 or the like.

Mounted to this connection piece is the upper part of the pole that consists of a tubular sheath 7 having the same diameter as the pole tube and made of a soft material, such for example as a thermoplastic material.

This sheath is in turn secured to the connection piece 5 by means of screws, or a pin 8 or any other suitable means known.

In the case of poles that are not required to comply with International Regulations, for example, poles to be used during training, a sheath 7 having a greater diameter than the pole tube may be used and, accordingly, directly fitted to pole tube 2 as viewed figure 2.

This solution is obviously less expensive than the former solution.

A number of advantages are provided by the use of a pole according to this invention, namely:
impact of skis against the pole is damped, thereby avoiding their rupture;
vibrations that could be transmitted to the pole and, thus, the articulated joint, with a risk of its being broken, are damped;
the weight of the pole is reduced; the center of gravity thereof is lowered, thereby reducing impact effect on the athlete upon his striking the pole.

It should be apparent that both the dimensions and the used materials may be varied as a function of application requirements.

Claims

1. A pole for skiing tracks which is provided with an articulated joint, characterized in that the pole includes an out-of-ground pole portion made at least in part of a soft material.

2. The ski pole according to claim 1, wherein the out-of-ground portion of the pole includes a first pole section of rigid material which is

connected to the articulated joint and to which a tubular connection piece is mounted, this tubular connection piece having a sheath of soft material closely fitted thereon which forms the upper part of the pole.

3. The pole for skiing tracks according to any preceding claim, wherein the pole portion of soft material is obtained from a thermoplastic material.

4. A pole for skiing tracks provided with an articulated joint, characterized in that the pole comprises :

a rigid pole tip for driving into ground;

an elastic joint connecting said pole tip with an out-of-ground part of the pole;

a pole section of rigid material connected to said articulated joint;

a tubular connection piece inserted in said rigid, out-of-ground portion of the pole;

a sheath snugly fitted on said connection piece to form the upper part of the pole.

5. A pole for skiing tracks as described herein above with reference to, and as shown by the accompanying drawing.

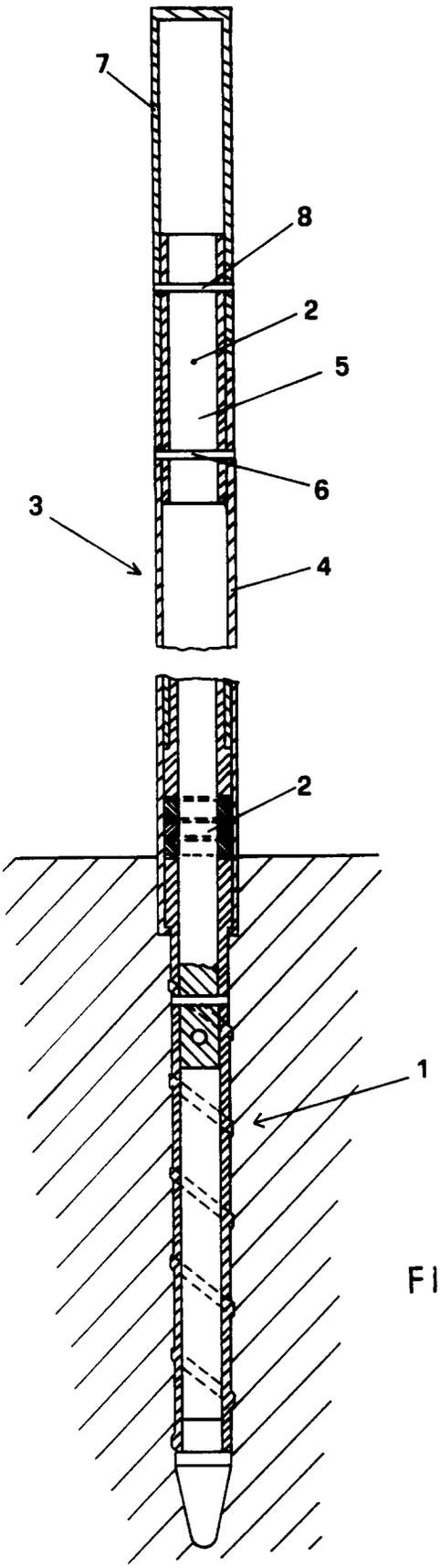

FIG. 1

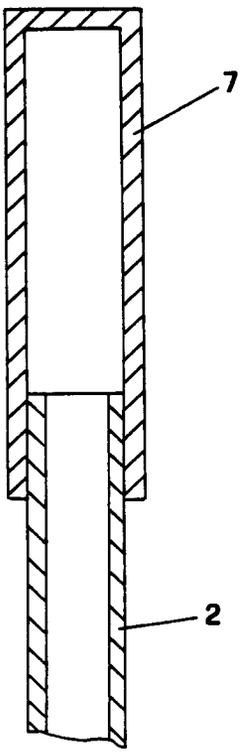

FIG. 2

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EUROPEAN SEARCH REPORT

Application Number

EP 91 11 2541

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.5)
X	FR-A-2 555 064 (IMS KUNSTSTOFF GMBH)	1,2,5	A63C19/06
A	* page 6, paragraph 4; figures 6,7 * * page 8; claim 11 *	3,4	
X	FR-A-2 454 318 (NEYROUD)	1,2,5	
A	* page 2, line 30 - line 39; claim 6; figures 1,2 *	4	
X	EP-A-0 240 595 (HINTERHOLZER)	1	
A	* page 8, paragraph 2; figure 7 *	2-5	
Y	WO-A-8 303 361 (ATLAS GUMMI AB) * page 2, line 30 - line 33; figures 1,3 *	1-5	
Y	US-A-3 371 647 (SHOPBELL) * column 2, line 48 - line 56; figures 1,3 *	1-5	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

A63C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	21 JANUARY 1992	STEEGMAN R.

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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