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(54) Pole for show jumping

(57) A pole 10, for use as a cross beam in a show jumping obstacle, comprised of a continuous extruded length defining an external wall 14 and an internal profile structure 11/12. The internal structure preferably includes a tubular shape capable of receiving an insert element 15 that can add weight to the pole as needed to meet show jump requirements.

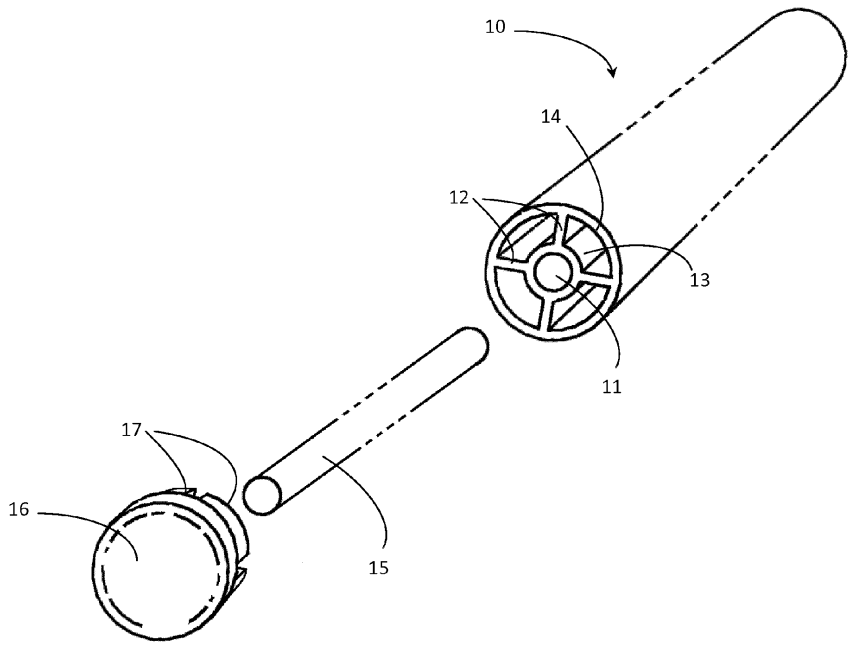


Fig. 1.

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Description

TECHNICAL FIELD

[0001] The present invention relates to a pole suitable for use in show jumping equestrian events, i.e. in the construction of temporary fences/obstacles with a cross beam or the like.

BACKGROUND TO THE INVENTION

[0002] When constructing obstacles for use in show jumping events, it is common to utilise a wooden pole as a cross beam, supported between fence posts or the like. The wooden cross beam provides a barrier at a predetermined height, but it is not securely fixed such that it will be knocked off its support in the event of substantial contact with either a horse or rider.

[0003] A conventional wooden construction should be made to meet specific international standards of length and weight; however, it can be appreciated that attaining the tolerance set by the international standards can be difficult dependent on the density/nature of the wood etc. Furthermore, wooden poles are known to splinter when split by a breaking force which can cause injury.

SUMMARY OF THE INVENTION

[0004] The present invention seeks to provide a pole for show jumping that is capable of replacing a traditional wooden cross-beam construction. Preferably, the pole of the invention must meet or exceed the effectiveness/capabilities of traditional wooden cross beams.

[0005] In a broad aspect of the invention there is provided a pole for show jumping according to the appended claim 1. Specifically, the pole according to the invention is comprised of a continuous length, e.g. an extrusion, capable of being cut to a required size. The pole includes an external wall and an internal channel, i.e. cavity forming structure, extending the length of the extrusion.

[0006] Preferably, the cavity is a substantially tubular construction, supported by ribs extending to the external wall(s).

[0007] The channel can be used for specific purposes, e.g. a weighted element can be inserted into the cavity to modify the overall weight of the pole according to the requirements of the show jump event (where it is typical to include heavy poles at the bottom of a jump and lighter poles at the top where they are easier to knock off). Furthermore, an insert element can have (alternatively or additionally) acoustic dampening characteristics such that the sound made when it falls is reduced.

[0008] Other insert functions may be considered such as electronic equipment to record information about the obstacle and strike forces etc. It is also possible that the "insert" is a material (e.g. granular like sand) able to be poured or otherwise introduced to the cavity to lend weight to the pole.

[0009] In a preferred form the pole is provided with an end cap including protrusions that can be received by the cavity or rib structure etc., such that an interference fit is possible.

[0010] In general the "cavity" can be interchangeably referred to as a channel, bore or other equivalent void space inherent in the internal pole structure and capable of receiving an insert.

[0011] The continuous length is preferably manufactured as an extrusion from a suitable plastic where the wall thickness, ribs, channel etc., are controlled as far as possible to produce a consistent weight per length. As mentioned, if modification of the overall weight is required then an insert element or material of known weight can be utilised. Other manufacturing techniques can be considered if they produce a generally equivalently functioning product.

[0012] The design of the structure and material of the pole, according to the invention, results in a controlled "fail". In other words, unlike a wooden pole which will split and splinter when it is subjected to extreme forces leading to failure, the pole of the invention will simply bend until it reaches an elastic limit, at which point it will undergo plastic deformation. If continued stress is applied then the pole will eventually shear across the deformation leaving a clean break and no splinters which could cause further injury.

BRIEF DESCRIPTION OF THE DRAWING

[0013] Figure 1 illustrates a general view of a pole of indeterminate length according to the invention, further including the features of an end cap and an insert element.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0014] A pole 10 capable for use as a cross beam in a show jumping obstacle is illustrated by Figure 1. The pole 10 can be cut or formed to any required length (usually dictated by Show Jumping Standards), as indicated by dotted lines in the mid-section. Pole 10 is manufactured as an extrusion which forms a cavity or channel 11 extending for the full length of the extrusion. Channel 11 itself is a tubular shape and part of an internal structure effectively suspended by ribs 12 extending laterally from the inner tube wall 13 toward an external pole wall 14. In the preferred embodiment each of the pole/tube have a circular cross-section and, hence, only a "single" continuous wall. However, further embodiments may take different cross-sectional shapes, e.g. oval, square, triangle, etc.

[0015] The internal extruded tube 11 supported by ribs 12, effectively forms several cavities, i.e. the regular tube shape itself in the centre and radial cavities defined by the ribs 12 between the tube wall 13 and pole external wall 14. Any of these cavities are capable of receiving an

object being inserted thereinto. A suitable insert element 15 is illustrated which has a circular cross-section capable of being received into the central tube, channel or bore 11 of pole 10.

[0016] The material chosen for insert 15 depends on the properties it is to impart to the pole 10. For example, insert 15 could have a heavy cast iron construction in order to lend significant weight to the pole or, alternatively, be made of soft foam that provides acoustic dampening qualities. Insert 15 may be a single continuous length or provided in several pieces, especially if a tailored weight is required. In such cases it is preferable to insert and secure an element 15 into each end of the pole rather than allowing free sliding movement of any insert element because this could affect the weight distribution of the pole which is undesirable. A spacer element (not illustrated) between inserts may be employed so that multiple inserts can be distributed along the length of the pole. Multiple types of insert material can be used at the same time, because it is desirable to fill up the substantive void provided by channel 11.

[0017] In the preferred form pole 10 is a plastic extrusion and, as such, a plastic moulding/extrusion can be coloured as required, which avoids the need for additional undercoat/base paint as would be necessary in connection with a wooden pole. Further colours/stripes etc., can be applied during the manufacturing process using known techniques.

[0018] By way of example, a pole according to the invention would likely possess an external diameter of approximately 95 millimetres with an internal tube diameter of 25.4 millimetres, suitable for receiving a common type of iron rod as an insert element 15.

[0019] An end cap 16 is provided to secure any insert element within pole 10 and provide a tidy finish. As illustrated, cap 16 includes one or more protrusions 17 that will mate with the internal structure/extrusion profile of pole 10, in this case ribs 12 and the central tubular cavity 11. Preferably the closure of cap 16 is by way of an interference fit such that the interior of pole 10 is easily accessible and inserts can be added or removed when needed. However, other fastening mechanisms can be considered such as a bayonet fitting or spring biased push buttons.

[0020] It is expected that pole 10 can be provided, cut to standard lengths (e.g. 10 foot or 12 foot), as a set with end caps and a range of inserts as required.

[0021] The pole construction of the present invention provides a simple but effective alternative to traditional wooden pole cross beams that are able to provide better manufacturing tolerances and a flexible degree of customisation for the end user. Available production techniques and materials can be utilised for the purposes of manufacturing a pole according to the invention.

Claims

1. A pole for show jumping comprised of a continuous length, defined by an external wall and an internal profile structure forming a cavity extending over the continuous length.

2. The pole of claim 1 wherein the cavity is defined by a tubular wall and supported by ribs extending to the external wall.

3. The pole of claim 1 or 2 provided in combination with an insert element to be received by the cavity.

4. The pole of claim 3 wherein the insert is a weighted element for modifying the overall weight of the pole.

5. The pole of claim 3 or 4 wherein the insert has sound dampening characteristics.

6. The pole of any of claims 3 to 5 wherein the insert element has a cross section shape to conform substantially with a cross section shape of the cavity.

7. The pole of any of claims 3 to 6 wherein a plurality of insert elements are provided in combination with the pole to occupy a substantive length of the cavity.

8. The pole of any preceding claim, including an end cap.

9. The pole of claim 8 wherein the end cap includes protrusions to be received by the internal profile structure, such that an interference fit to secure the end cap is possible.

10. The pole of any preceding claim, extruded from plastic material to form the continuous length and cut to a useable pole length.

11. A method of constructing a show jumping obstacle by use of a pole cut to a required length; said pole including an internal profile structure forming a cavity extending over its length;
wherein a weighted element is inserted into the cavity to add weight to the pole; and
the pole is mounted as a cross beam between two supporting structures at a required height from the ground.

12. The method of claim 11 wherein a plurality of weighted elements are inserted into the cavity with the optional use of spacer elements therebetween to distribute weight across the length of the pole.

13. The method of claim 11 or 12 wherein end caps are applied to each open end of the pole to provide a closure.

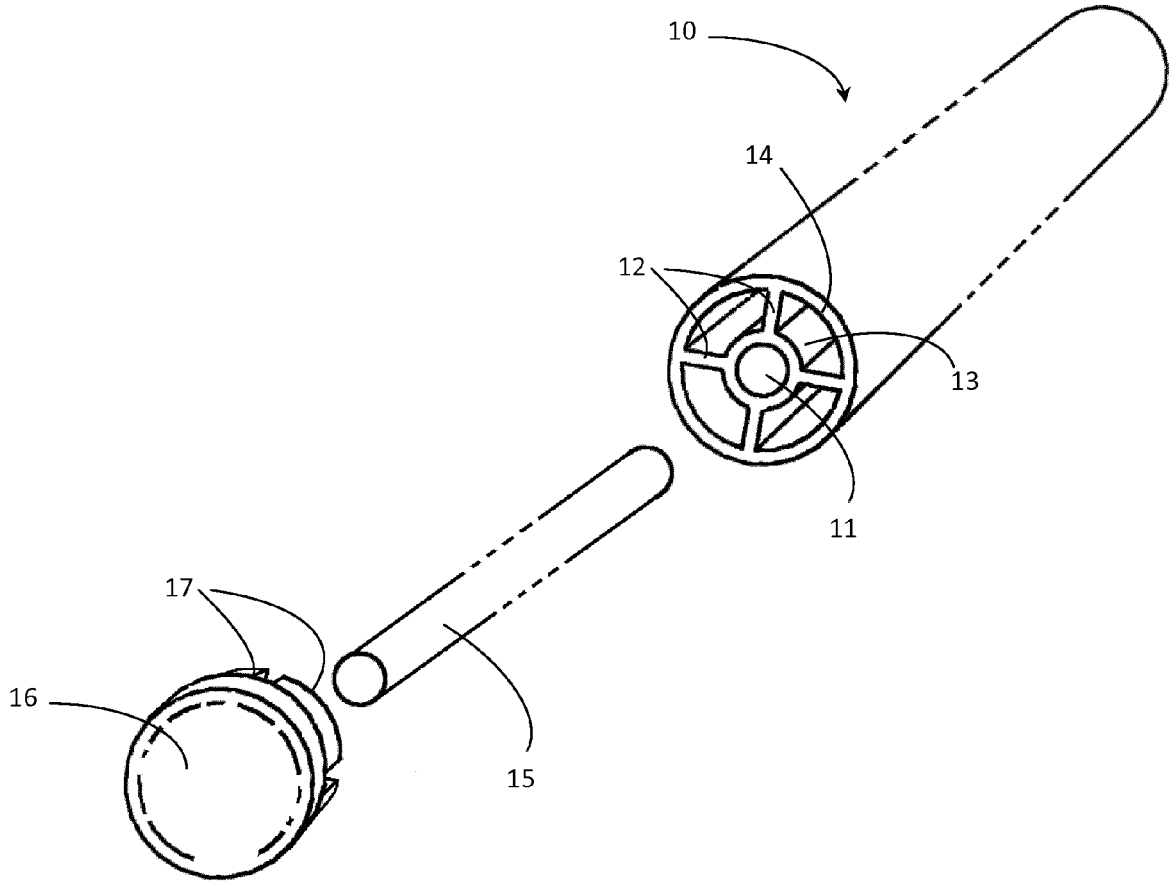


Fig. 1.

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EUROPEAN SEARCH REPORT

Application Number
EP 14 15 9013

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 201 10 561 U1 (WEMAS GMBH [DE]) 14 November 2002 (2002-11-14) * page 2, lines 15-18; page 2, lines 31-34; page 3, lines 1-5; page 3, lines 11-15; figures *	1-13	INV. A63K3/04
X	FR 2 048 516 A7 (SUSANNA DOMENICO) 19 March 1971 (1971-03-19) * page 2, line 40 - page 3, line 5; page 3, lines 19-22; page 4, lines 1-8; figures *	1,3-6,8, 11-13	
X	DE 20 2010 003355 U1 (DRUECKER OTTO [DE]) 17 June 2010 (2010-06-17) * paragraphs [0010]-[0015]; claim 11; figures *	1,3-8, 11-13	
			TECHNICAL FIELDS SEARCHED (IPC)
			A63K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	14 May 2014	Turmo, Robert

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 14 15 9013

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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14-05-2014

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82