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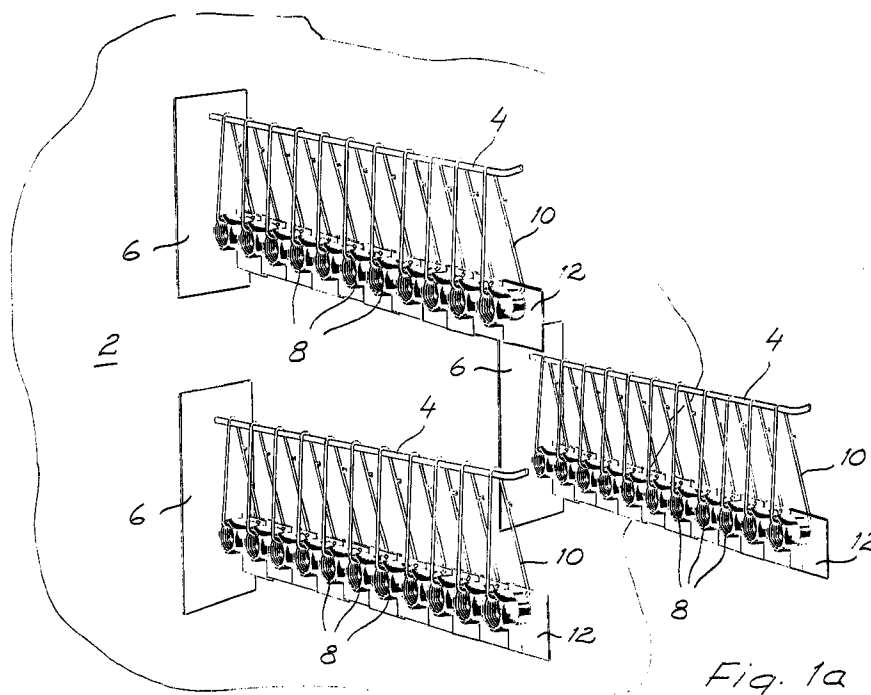
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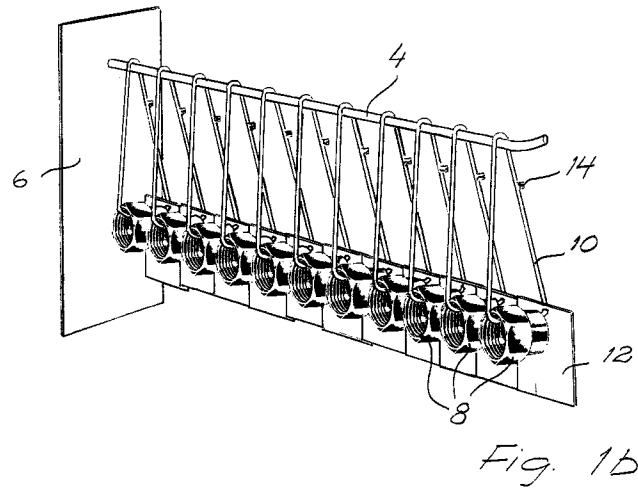
(54) **A system for the exposure of products, especially pipe and connector elements, in shops**

(57) A system for the exposure of products, especially pipe and connector elements, in shops comprises carriers (4) fastened to a wall (2) for supporting the

products (8). The products (8) are supported by the carriers (4) by means of strings (10).



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Description

[0001] The present invention relates to a system for the exposure of products, especially pipe and connector elements, in shops.

[0002] It is previously known to expose products, for example pipe and connector elements, in shops by enclosing the products in separate packings which are suspended from carriers formed as so called sticks which are fastened to a substantially vertical wall. In order to expose the products each of the separate packings has at least one side consisting of a transparent plastic material. The side manufactured from plastic material is usually formed from a relatively thick, rigid plastic material. Such packings are unsuitable with regard to the environmental requirements, especially with regard to the fact that the plastic material is not decomposable in a natural way. Another drawback is the fact that the packings take up a great deal of space in relation to the size of the products enclosed in the packings which especially at the transportation of the products to the shops means that large volumes must be transported. This is of course unfavourable with regard to the environmental point of view as well as with regard to the costs.

[0003] The object of the invention is to provide an improved system for the exposure of products in shops, the system being improved with regard to the environmental point of view as well as with regard to the costs.

[0004] In order to comply with this object the system according to the invention is characterized in that the products are by means of strings supported by the carriers which are constituted by for example sticks fastened to and projecting from a vertical wall.

[0005] This system for the exposure of products is extremely favourable with regard to the environmental point of view, as the strings can be manufactured from a material which is decomposable in a natural way. It is realized also that the system is advantageous with regard to the transportation as the transported volumes are in substantial agreement with the volumes of the products which are transported.

[0006] It is suitable that each product is support by means of a string together with a label or tag provided with a product specification. This label or tag is provided with information about the product and is preferably provided with a bar code which can be read at the cash-desk of the shop.

[0007] Preferably, the strings have the shape of loops. In the case that the products are constituted by pipe and connector elements which are often provided with through openings, the strings are connected with the products by having the loops extending through the openings of the products. If the products are not provided with through openings, the strings can extend around pins which are fitted into and diametrically extend across non-through openings in the products. As an alternative the strings can be connected with card-

board pieces in which parts of the products are received.

[0008] In the case that the products are constituted by pipe and connector elements provided with threads, it is suitable to manufacture the strings from fibres which at the use of the pipe or connector elements can be applied to the threads thereof or to complementary threads so as to provide for a tight connection between the threads. In this case it is suitable that the strings consist of flax fibres.

[0009] The invention shall in the following be described in detail with reference to the accompanying drawings.

Figs 1a and 1b schematically show a system according to the invention for the exposure of pipe and connector elements supported by carriers formed as so called sticks.

Figs. 2 - 4 show different principles for suspending different kinds of pipe and connector elements on carriers formed as sticks.

[0010] The system according to the invention for the exposure of products in shops comprises in the embodiment shown in Fig. 1 a number of sticks 4 projecting from and fastened to a substantially vertical wall 2 in substantial horizontal positions. Adjacent the wall the sticks 4 support information tags 6 which state the type of product to be supported by the stick 4 in question, information about the products and suitably also a bar code which can be read when the products on the sticks 4 are used up so as to facilitate new orders of the products of said kind.

[0011] In the embodiment shown the products are constituted by pipe and connector elements 8 which in accordance with the invention are suspended from the sticks 4 by means of strings 10 formed as loops. The loops 10 can be connected with the pipe and connector elements 8 in different ways dependent on the design of the pipe and connector elements 8. Different principles for connecting the strings 10 with the pipe and connector elements are shown in Figs. 2 - 4. In addition to the pipe and connector elements 8 the strings 10 support tags 12 which are provided with the necessary information about the pipe and connector element in question. It is suitable that the tag 12 is provided also with a bar code which can be read at the cash-desk of the shop.

[0012] The loops 10 are constituted by pieces of strings, the ends of the pieces being connected with each other by means of some kind of simple clamps 14 consisting of metal.

[0013] It is preferred that the string 10 as well as the clamp 14 consist of a material which is in a natural way decomposable, the string for example consisting of fibres of flax and the clamp 14 consisting of a metal which is easily corroded. In order to provide the loop, the ends of the string can of course also be knitted

together or can be connected with each other by means of a piece of tape or any other kind of fixing means.

[0014] The pipe and connector elements can for example be delivered to the shops in such a way that the strings of the elements are connected in groups of five which facilitates the positioning of a predetermined number of pipe and connector elements onto the sticks 4. Subsequently to the positioning onto the sticks 4 the threads connecting the strings 10 with each other are cut.

[0015] Fig. 2 shows the support of a socket 18 provided with a through opening 16 onto the stick 4 by means of a string 10 formed as a loop. The loop 10 supports also the tag 12 containing information about the product supported by the string. By introducing a piece of the string through the through opening 16 of the socket 18 and connecting the ends of the string with each other by means of the clamp 14, the loop necessary for the support of the product is established.

[0016] Fig. 3 shows the suspension of a cover 20 from the stick 4. The cover 20 lacks a through opening but has an inner thread 22 to which a pin 24 consisting of for example wood is connected. The pin 24 extends diametrically across the cover 20 and is screwed onto the inner thread 22 in such a way that the ends of the pin 24 are firmly connected therewith. A piece of string 10 is connected with the pin 24 by being drawn inside the pin whereupon the ends of the strings are connected with each other by means of the clamp 14. Also in this embodiment the string 10 supports a tag containing information about the cover and a bar code to be read at the cash-desk of the shop.

[0017] Fig. 4 shows the suspension of a mud plug 26 onto the stick 4. The mud plug 26 lacks a through opening and lacks also an inner thread. However, the mud plug 26 has an outer thread 28 by means of which the mud plug is fastened in a hole in a cardboard piece 30. The string 10 is introduced through an opening in the cardboard piece whereupon the ends of the string are connected with each other by means of a clamp 14 for forming a loop. In this embodiment of the connection between the product and the string 10 the information about the mud plug and also the bar code can be provided on the cardboard piece 30, even if it is possible also to provide the information and the bar code on a separate tag fastened to the string 10.

[0018] In an advantageous embodiment of the invention the string 10 is manufactured from such fibres, preferably flax fibres, which can be used for providing a tight connection of the thread of the suspended pipe or connector element with a complementary thread. Thereby, the flax string is untwisted and the flax fibres thereby established are wound around the outer thread, whereupon the threads are screwed together. In the case that the suspended pipe or coupling element is provided with an inner thread a necessary sealing paste can be pre-applied to the thread. It is of course suitable to add to the tag 12 information about the possibilities of using

the string 10 in such a way that it provides sealing fibres.

[0019] As appears from the above description all parts of the system for suspending pipe and coupling elements from the sticks 4 consist of materials which are easily decomposable in a natural way. Thus, the system according to the invention represents with regard to the environment an extremely advantageous solution to the problem of exposing products in shops. It appears also that the system according to the invention is advantageous with regard to the transportation, as the products require only a fracture of the volume which is required for the transportation of the products, if these are arranged in separate packings.

Claims

1. A system for the exposure of products, especially pipe and connector elements, in shops, comprising carriers (4) for supporting the products (8; 18; 20; 26), the carriers being fastened to a wall (2) and projecting therefrom and being formed as so called sticks, **characterized** in that the products (8; 18; 20; 26) are supported by the carriers by means of strings (10).
2. A system as claimed in claim 1, **characterized** in that the strings (10) consist of a decomposable material.
3. A system as claimed in claim 1 or 2, **characterized** in that each product (8; 18; 20) is supported by a string together with a tag (12) provided with product information.
4. A system as claimed in any of the preceding claims, **characterized** in that the strings (10) have the shape of loops.
5. A system as claimed in claim 4, **characterized** in that the strings (10) shaped as loops extend through through openings (16) in the products (18).
6. A system as claimed in claim 4, **characterized** in that the strings extend around pins (24) which are fitted into and diametrically extend over non-through openings in the products (20).
7. A system as claimed in claim 6, in which the products are constituted by pipe or connector elements (20) having openings provided with threads (22), **characterized** in that the pins (24) have their ends connected with the threads (22) of the pipe or connector elements.
8. A system as claimed in claim 4, in which the products are constituted by pipe or connector elements (26) lacking through openings and provided with outer threads (28), **characterized** by cardboard

pieces provided with openings (30) into which the pipe or connector elements (26) are screwed by means of their outer threads (28).

9. A system as claimed in any of the preceding claims, **characterized** by an information tag (6) provided on each carrier (4) in connection with the wall (2) supporting the carrier, said tag containing information about the product which is supported by the carrier. 5 10
10. A system as claimed in any of the preceding claims, in which the products are constituted by pipe or connector elements (8; 18; 20; 26) provided with threads, **characterized** in that the strings (10) consist of fibres adapted to be applied to the threads or to complementary threads so as to facilitate a tight connection of the threads with each other. 15
11. A system as claimed in claim 10, **characterized** in that the strings (10) consist of fibres of flax. 20

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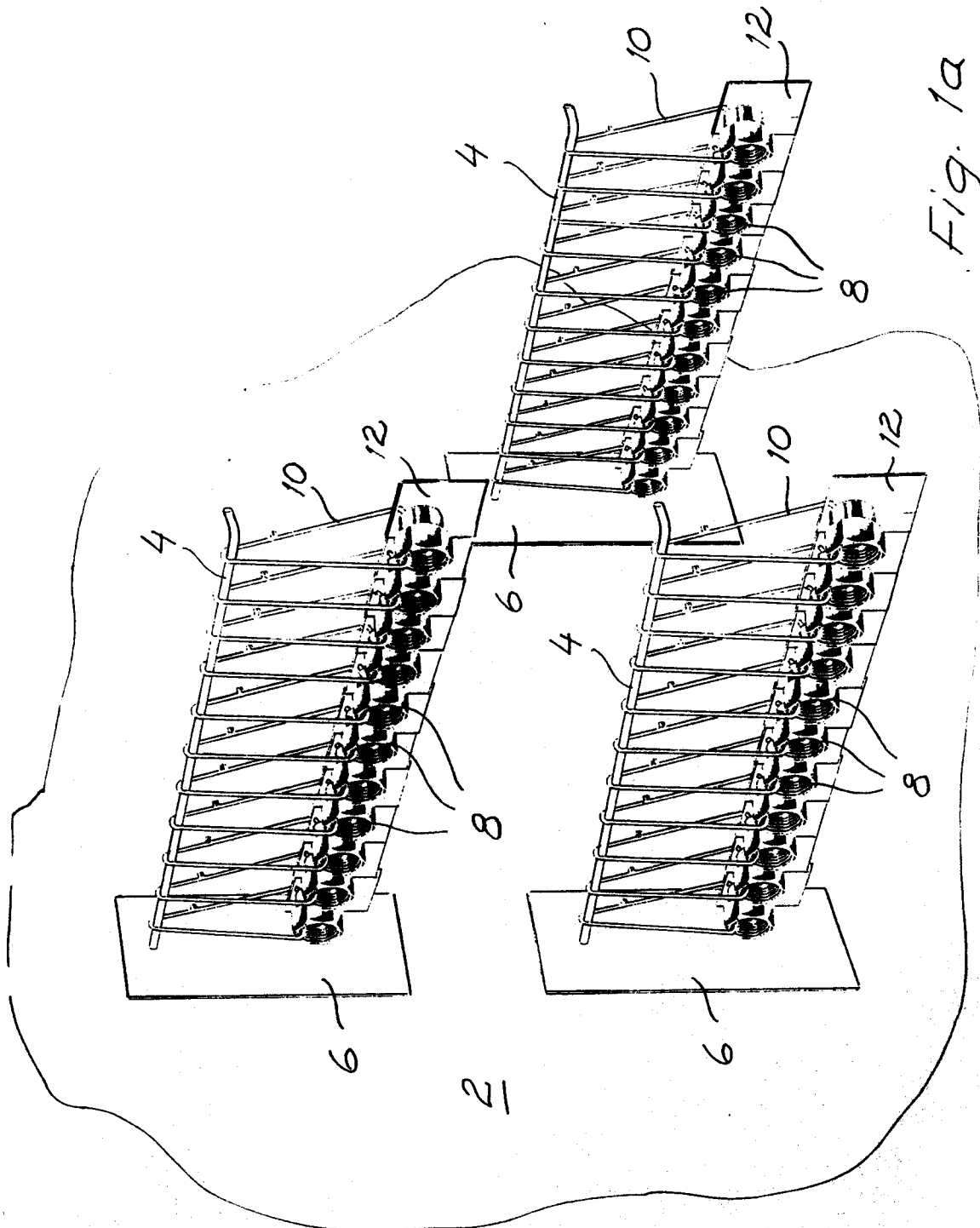
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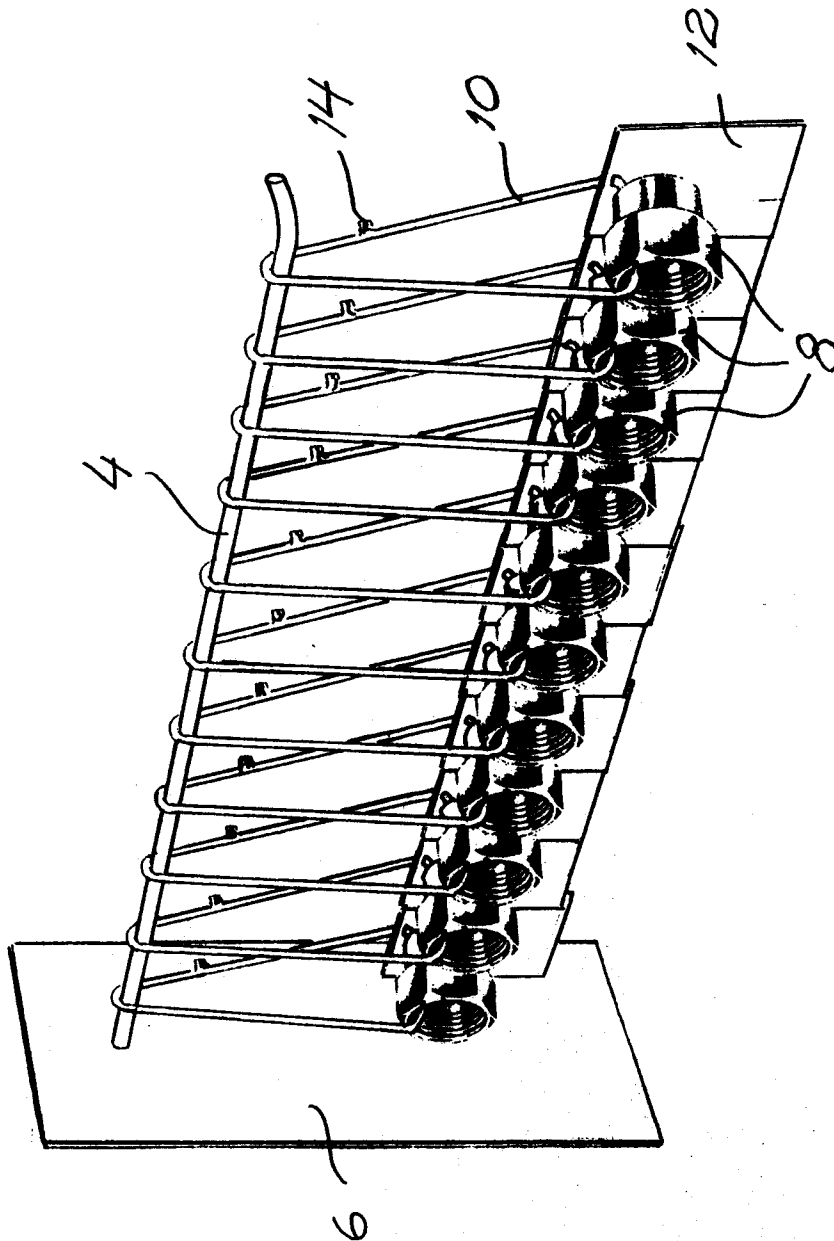


Fig. 1b

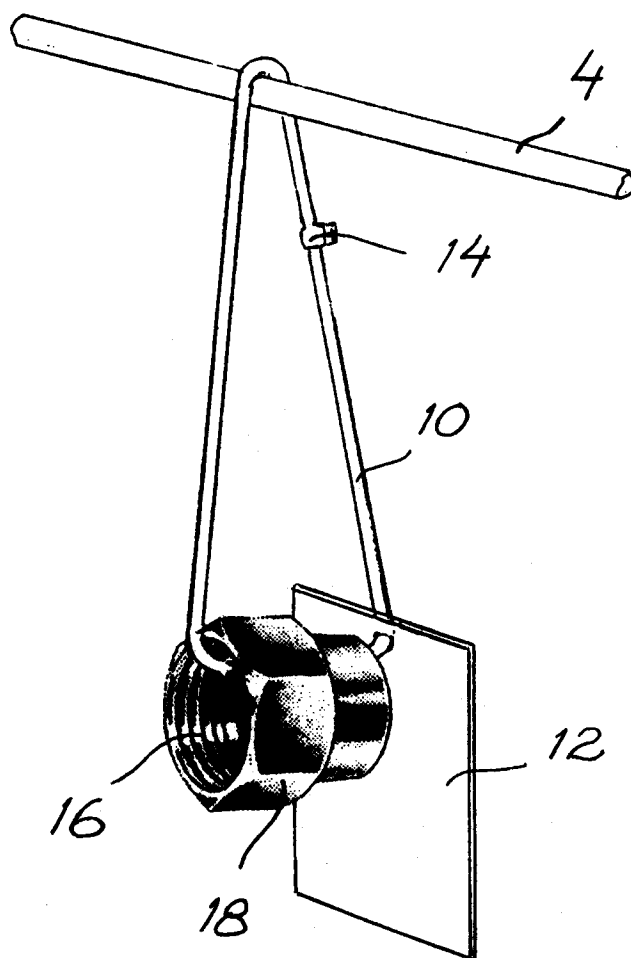


Fig. 2

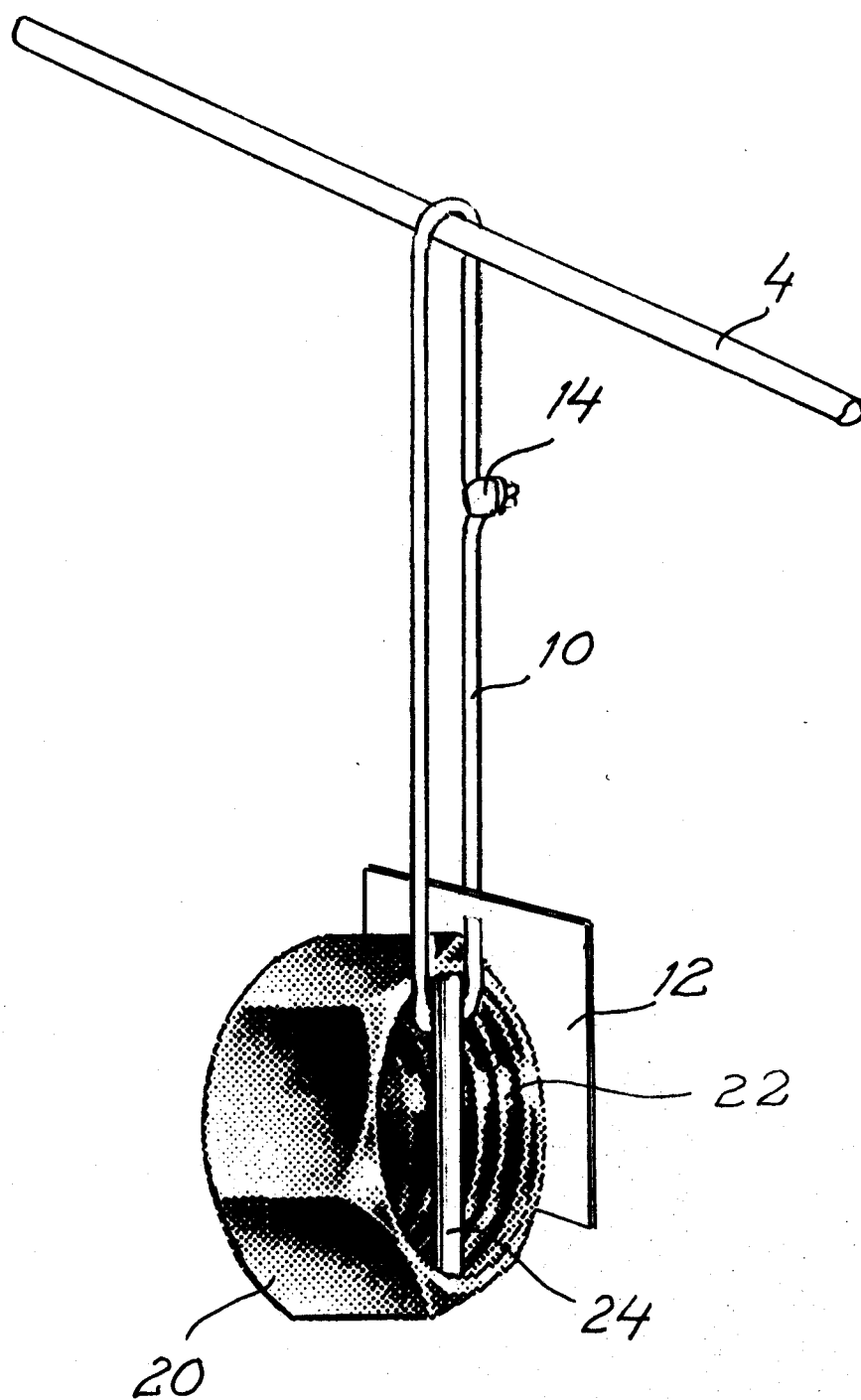


Fig. 3

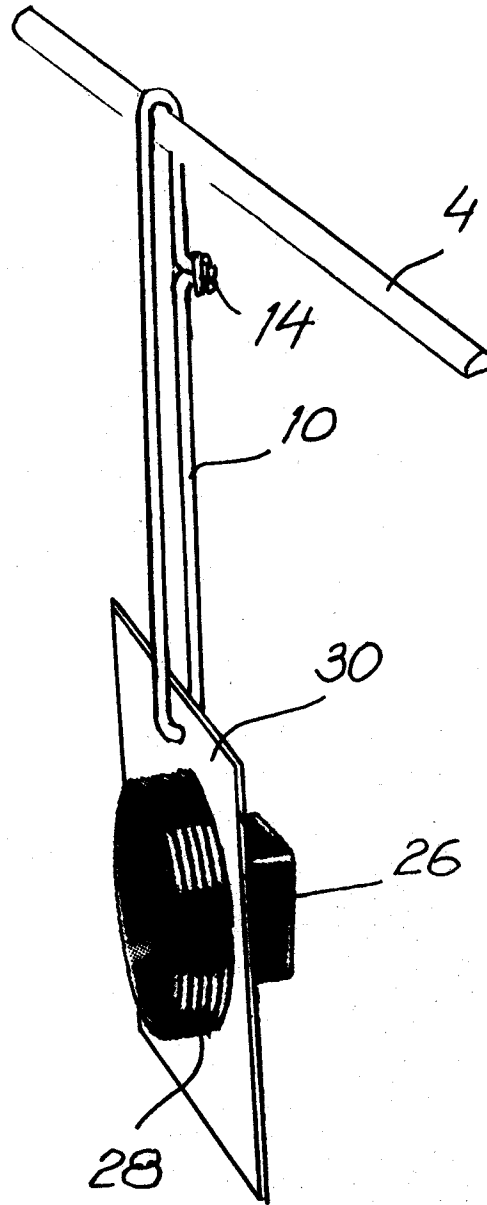


Fig. 4