



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 060 845 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
20.12.2000 Bulletin 2000/51

(51) Int. Cl.⁷: **B25B 25/00**

(21) Application number: **00105846.0**

(22) Date of filing: **20.03.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **18.06.1999 IT MI990403**

(71) Applicant: **Emiflex S.p.A.**
20039 Varedo (Milano) (IT)

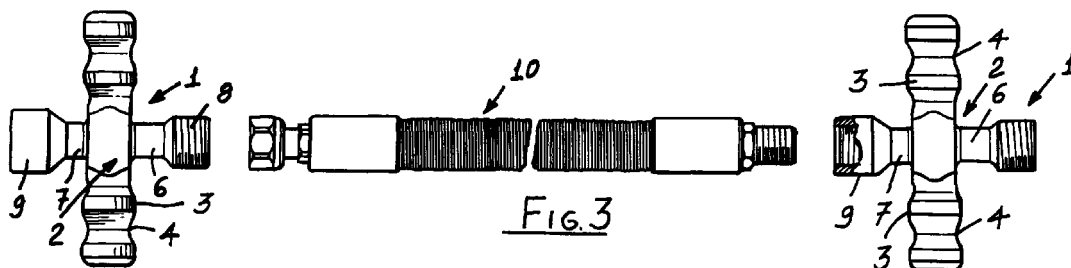
(72) Inventor: **Lai, Giovanni**
20039 Varedo (Milano) (IT)

(74) Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti
Dott.Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
20122 Milano (IT)

(54) **Device for stretching extensible flexible hoses**

(57) The present invention relates to a device for easily stretching extensible flexible bodies or hoses, comprising a handle element provided with male and female fitting which can be removably coupled to the

end portions of an extensible flexible hose, for providing a gripping assembly.



Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a device for easily stretching extensible or stretchable flexible hoses.

[0002] As is known, in several fields, such as, for example, the plumbing or hydraulic field, are conventionally used extensible flexible hoses, which are made of a corrugated element, usually comprising a stainless steel material, thereon a further protecting coating can be provided.

[0003] The mentioned extensible flexible hoses are so designed that they can be easily stretched and bent in order to follow any desired curved profile.

[0004] In order to stretch or extend the flexible hose, it is necessary to provide a pulling effort at the hose end portions, which would involve a difficult gripping since the coupling fitting provided at the end portions of the hose cannot be easily handled.

SUMMARY OF THE INVENTION

[0005] Accordingly, the aim of the present invention is to solve the above mentioned problem, by providing a device for easily stretching extensible flexible hoses, which allows the flexible hoses to be quickly and easily stretched or extended, without the need of performing very complex or difficult operations.

[0006] Within the scope of the above mentioned aim, a main object of the present invention is to provide such a device which can be easily handled and applied to a broad range of flexible hoses or pipes.

[0007] Another object of the present invention is to provide a device for easily stretching extensible flexible hoses which, owing to its specifically designed constructional features, is very reliable and safe in operation.

[0008] Yet another object of the present invention is to provide such a device which can be easily made starting from easily available elements and materials and which, moreover, is very competitive from a mere economic standpoint.

[0009] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a device for stretching flexible hoses, characterized in that said device comprises a gripping element, including male and female fittings, adapted to be removably connected to the end portions of an extensible flexible hose, to provide an easily gripped assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Further characteristics and advantages of the present invention will become more apparent here-

inafter from the following detailed disclosure of a device for easily stretching extensible flexible hoses, according to the present invention, which is illustrated, by way of an indicative, but not limitative, example, in the accompanying drawings, where:

Figure 1 is a perspective view illustrating the device according to the present invention;

Figure 2 is a top plan view illustrating the device according to the present invention;

Figure 3 is an exploded view illustrating the device according to the invention applied to an extensible or stretchable flexible hose; and

Figure 4 illustrated the inventive device applied to the end portions of an extensible flexible hose.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0011] With reference to the number references of the above mentioned figures, the device for stretching flexible hoses or pipes, according to the present invention, which has been generally indicated by the reference number 1, comprises a cross-like body 2, defining a gripping element 3 of substantially cylindrical shape, which can be provided with slots 4 for facilitating the gripping thereof.

[0012] A first and second end-pieces 6 and 7 extends perpendicularly to the gripping element, said end-pieces 6 and 7 ending, respectively, with a male fitting 8 and a female fitting 9, which are removably coupled to the end portions of a stretchable or extensible hose or pipe 10, thereby providing a gripping assembly.

[0013] Advantageously, by coupling to both end portions a cross-like body 2, it would be possible to easily obtain, with a very small effort, the desired extension or stretching of the hose, since it will be possible to safely grip the hose end portion coupled to the gripping element.

[0014] From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

[0015] In practicing the invention, the used materials, provided that they are compatible to the intended application, as well as the contingent size and shapes, can be any, depending on requirements.

Claims

1. A device for stretching flexible hoses, characterized in that said device comprises a gripping element, including male and female fittings, adapted to be removably connected to the end portions of an extensible flexible hose, to provide an easily gripped assembly.

2. A device according to Claim 1, characterized in that said device comprises a cross-like body defining said handle element.
3. A device according to Claims 1 and 2, characterized in that said handle element has a substantially elongated cylindric configuration. 5
4. A device according to one or more of the preceding claims, characterized in that said elongated cylindric body is provided with a plurality of gripping slots to be easily gripped by a user hand. 10
5. A device according to one or more of the preceding claims, characterized in that said device comprises a first and second end-pieces, extending from a middle portion of said handle element and being arranged in a mutually aligned relationship. 15
6. A device according to one or more of the preceding claims, characterized in that said first and second end-pieces are arranged substantially perpendicular to the handle element. 20
7. A device for stretching flexible extensible hoses, according to one or more of the preceding claims, and substantially as broadly disclosed and illustrated and for the intended aim and objects. 25

30

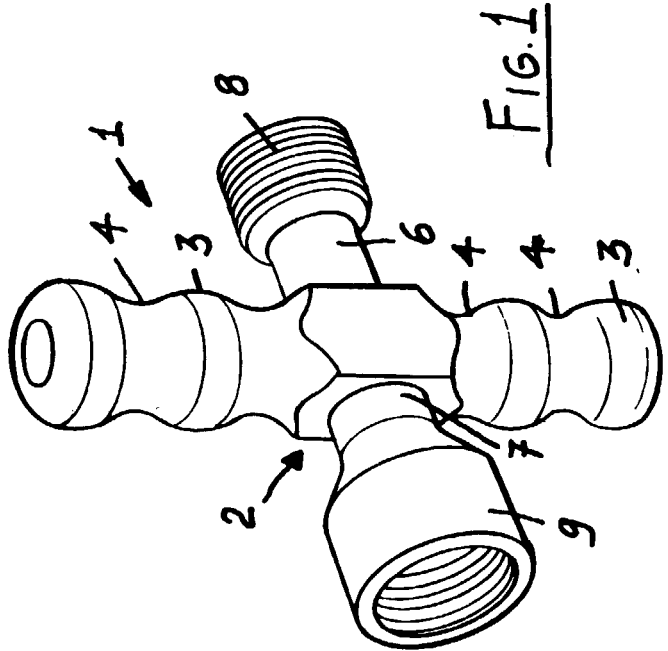
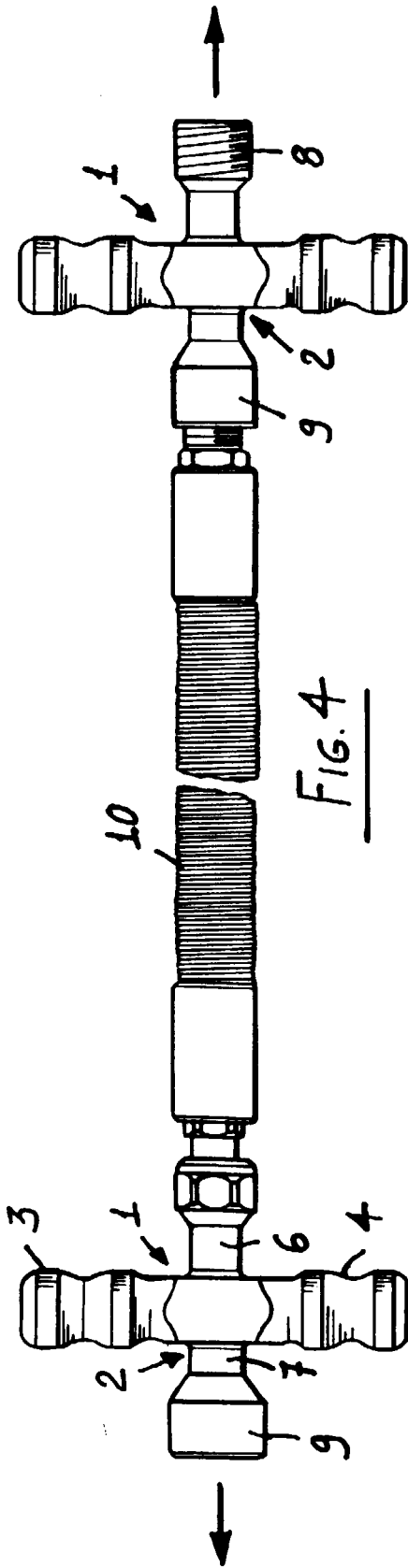
35

40

45

50

55



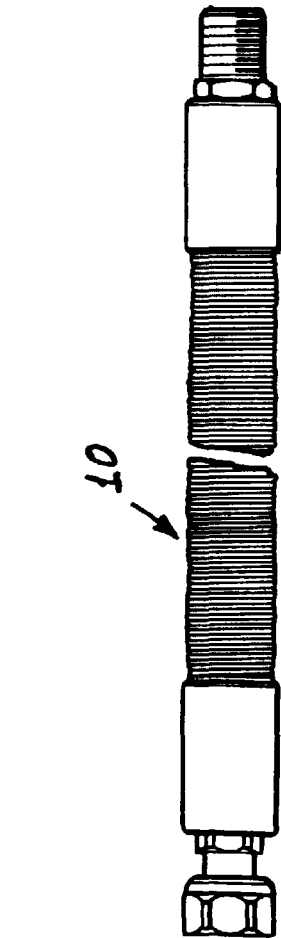
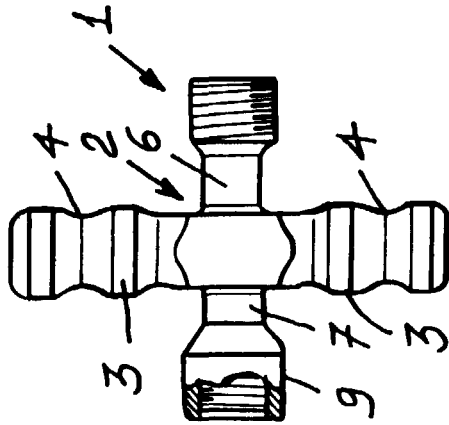


Fig. 3

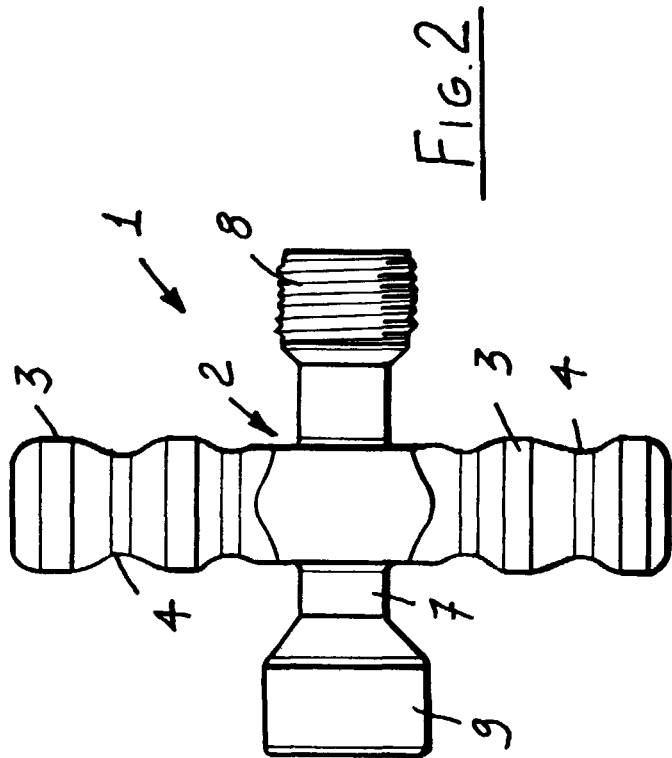
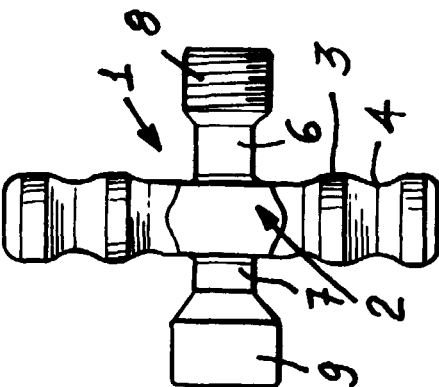


Fig. 2