United States Patent

[11] 3,556,090

[72] Inventor **Edmond Pierre Robert Viel**
Cite Industrielle Ducos, Noumea, New Caledonia

[21] Appl. No. **725,023**
[22] Filed **Apr. 29, 1968**
[45] Patented **Jan. 19, 1971**
[32] Priority **Jan. 25, 1968**
[33] **France**
[31] **P.V.137,369**

[54] **TRACTION APPARATUS**
10 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **128/75**
[51] **Int. Cl.** **A61h 1/02**
[50] **Field of Search** 128/75, 84, 71, 70, 78

[56] **References Cited**

UNITED STATES PATENTS

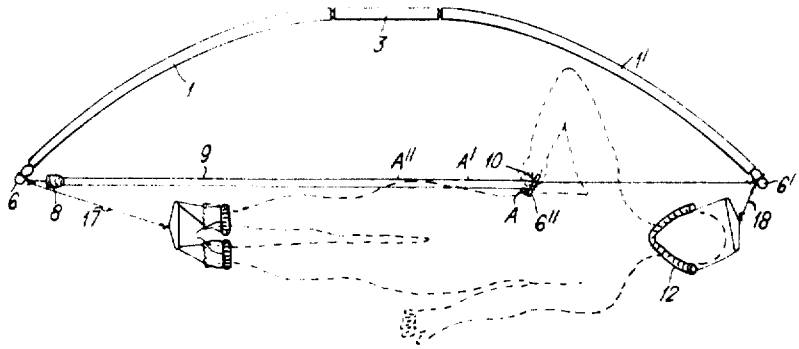
1,605,578	11/1926	Clark	128/75
2,377,940	6/1945	Hughes	128/84

FOREIGN PATENTS

895,489	5/1962	England	128/75

Primary Examiner—Richard A. Gaudet
Assistant Examiner—J. Yasko
Attorneys—Ernest F. Marmorek, Jordan B. Bierman and Marmorek & Bierman

ABSTRACT: A traction apparatus for the attachment thereto of traction elements capable of being fastened to parts of the body of a patient, the apparatus comprising a substantially rodlike member having two elastic and flexible elongated elements of considerable tensile strength, said elongated elements being interconnected with or without a tubular connector between them, the apparatus further comprising a manually adjustable tensioning device connected between the free ends of said elongated elements.



PATENTED JAN 19 1971

3,556,090

SHEET 1 OF 3

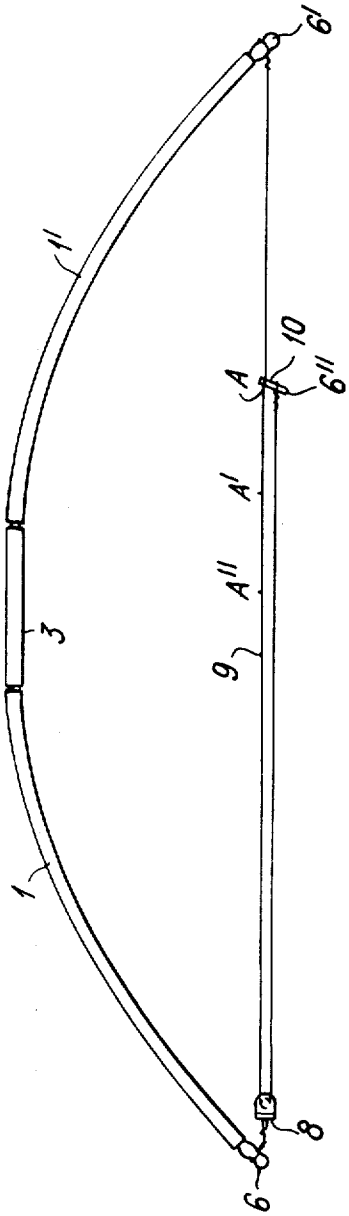


FIG. 1

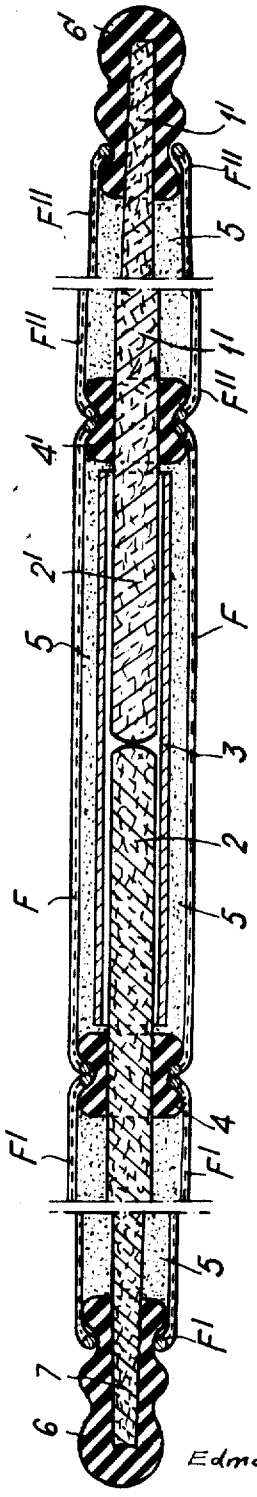


FIG. 2

Inventor:
Edmond P.R. Viel,

By Mamorsk & Bierman,
Attorneys.

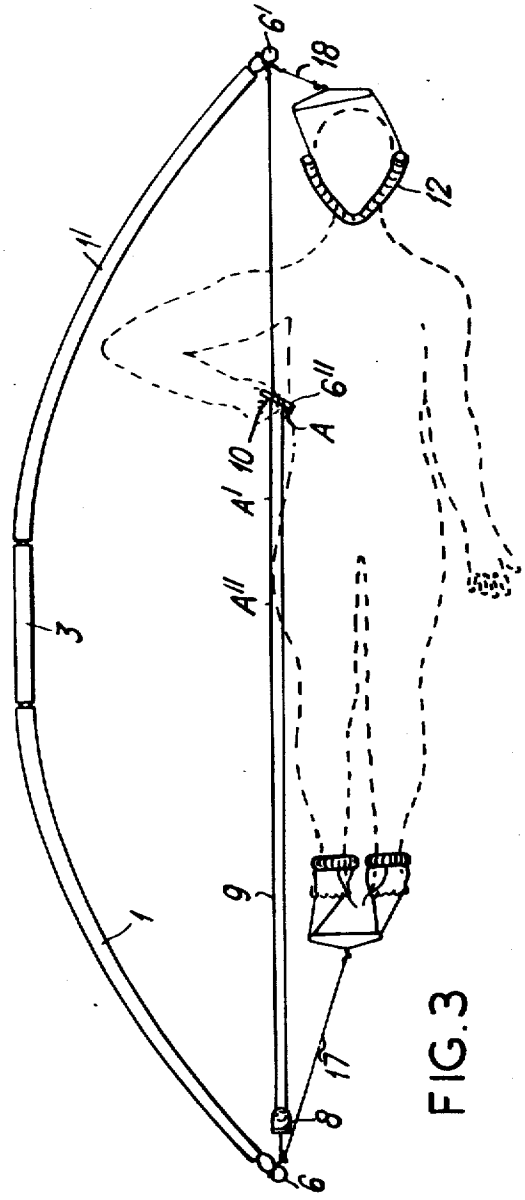


FIG. 3

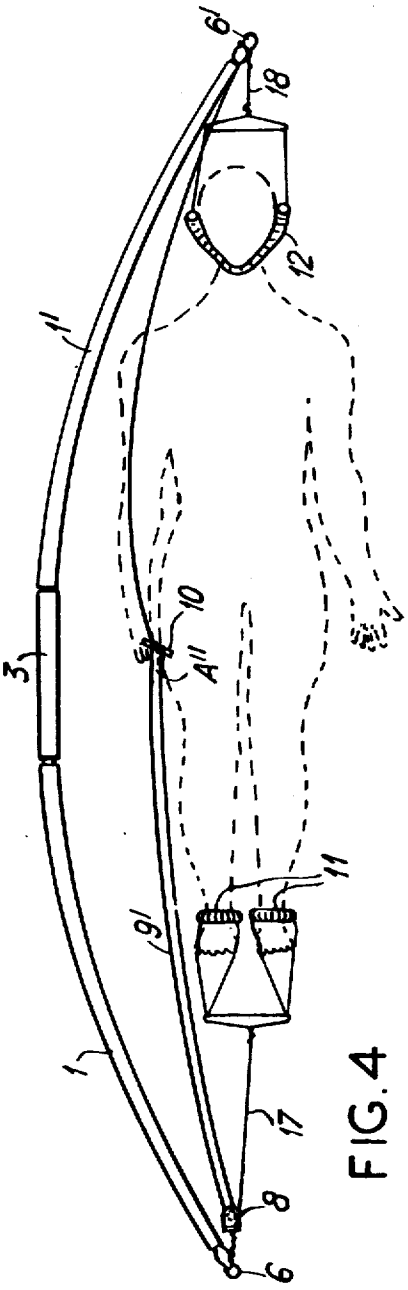


FIG. 4

Inventor:
Edmond P.R. Vial,

By Marmorek & Bienaimé
Attorneys.

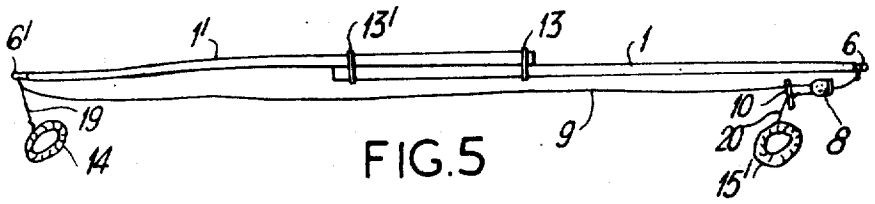


FIG.5

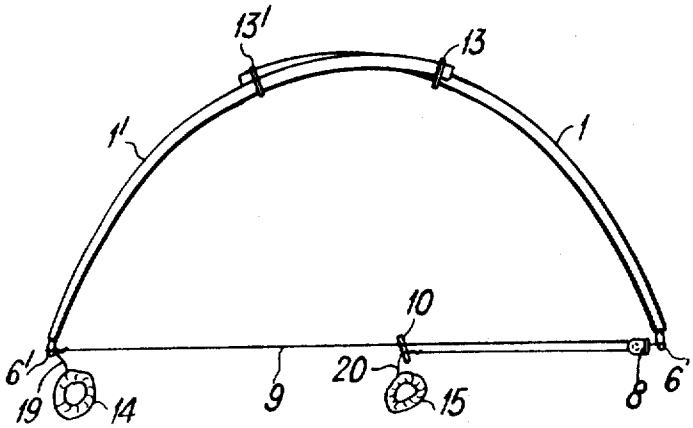


FIG.6

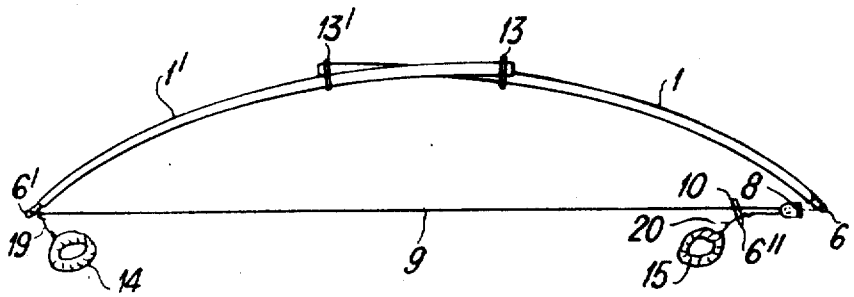


FIG.7

Inventor:
Edmond P.R. Viel,

By Marmorek & Berman,
Attorneys.

TRACTION APPARATUS

The present invention relates to an improved appliance for use as a traction apparatus.

It is known that persons suffering, for instance from sagging or slipped vertebral discs, can improve their condition by practicing the traction of the vertebral column. For carrying out such traction exercises different devices, which are more or less complicated and are comparatively costly, have already been proposed.

The present invention visualizes an apparatus for the purpose set forth which can be associated with traction elements fastened to the body of a patient, for instance with anklets, an abdominal belt, a thoracic or chest belt, a head strap or the like, the apparatus being capable of economic construction and of being handled in a very simple manner.

The apparatus according to the invention is characterized essentially, in that it comprises a substantially rodlike member having two elongated elements preferably of truncated conical shape, for instance of glass fibre, which have considerable elasticity and great tensile strength, each said element having a substantially cylindrical end portion which is pivotable in an intermediate connector, if inserted in such a connector. Before the apparatus is used, the free ends of the rodlike member intended to exercise a traction on body parts of the patient undergoing the treatment, are drawn together by suitable tensioning means.

According to a feature of the invention these tensioning means are constituted by a string one end of which is fastened to one of the free ends of the substantially rodlike member, the string being returned over a pulley the block of which is attached to the other free end of said member, and its other end being fastened to an operating handle which has a transverse hole through which the said string is passed.

Thus the apparatus for traction exercises, according to the invention, includes a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity and flexibility, and of great tensile strength, the two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used.

Other features and advantages of the invention will be understood from the following description by reference to the accompanying drawings which illustrate diagrammatically, and by way of example only, a preferred form of the improved traction device, and wherein:

FIG. 1 is an elevational view showing the apparatus together with its tensioning means;

FIG. 2 is a sectional view on a considerably larger scale of the parts of the rodlike member of the apparatus not deformed by the tensioning means;

FIG. 3 is a view of the apparatus in a condition in which the said rodlike member is prestressed by the tensioning means or device, the user of the apparatus, who is indicated in dotted lines, being about to release said tensioning means;

FIG. 4 is a view showing the manner in which the apparatus exerts the traction effect on the user after the release of the tensioning device;

FIG. 5 shows the manner of assembling the parts of the apparatus for carrying out transverse traction exercises;

FIG. 6 is a view showing the assembly according to FIG. 5 in its prestressed condition; and

FIG. 7 is a view similar to FIG. 6 with the tensioning means released.

As can be seen from FIG. 1, the rodlike member of the apparatus, which is made of a material of great elasticity and flexibility, e.g. of glass fibers essentially comprises two identical, elongated elements 1 and 1' of substantially truncated

conical shape which taper in the direction towards their free ends. The elements 1 and 1' possess cylindrical end portions 2 and 2', respectively, each said end portion engaging in one end of an intermediate tubular connector 3. The elements 1 and 1' arry, each near its cylindrical end portion, a reinforcement 4 and 4', respectively, which constitutes an abutment and is provided about midlength thereof with a peripheral groove. The reinforcements 4 and 4' are preferably made of a pliant and soft material, for instance of rubber or of a synthetic plastic material.

The intermediate connector 3 is made of a tube of such an internal diameter that the cylindrical end portion 2 and 2' of the elongated elements 1 and 1' of the member can pivot therein. The tube which constitutes the connector 3, and the elongated elements 1 and 1' of the body are each surrounded by a mass of padding material 5 which also overlies the ends of the reinforcements 4 and 4', respectively. The padding of each part of the assembly is covered by a sheath of tissue or fabric which by strings inserted into the selvedges or edges of the fabric can be secured to the respective mass of padding 5. Thus the padded portion of the connector 3 is covered by a sheath F the ends of which are locked each in one of the peripheral grooves of the reinforcements 4 and 4', respectively. The sheaths F' and F'' which enclose the elongated elements 1 and 1', respectively, have each one of its ends forced likewise into the groove formed in the reinforcements 4 and 4', respectively, whereas the opposite ends of these sheaths are locked in one of two peripheral grooves formed in a ferrule 6 and 6', respectively, the ferrules being attached to the tapering end portions of the truncated conical elements 1 and 1', respectively. The second groove formed in the above-mentioned ferrules 6 and 6' serves for the fixation to the rodlike member, of the tensioning device and of the tension transfer or traction elements for connection to the body of a patient.

Thus the second groove of the ferrule 6 serves, on the one hand, for the fixation of a string 7 attached to the pulley block 8 of a pulley over which is passed the string 9 of a tensioning device to be described hereafter and, on the other hand, for the fixation by a further string (not shown in FIG. 2) which is attached to one of the traction elements secured to the body of a patient, for instance to a pair of anklets, to an abdominal belt, or to a bracelet. Similarly, the second groove of the ferrule 6' serves for the fixation thereto of one end of a string 9 of the tensioning device and, additionally, of a string attached, for instance, to a head band or to a thoracic belt secured to the body of the patient. Like the reinforcements 4 and 4' which have substantially the same diameters as the two ferrules, the latter are manufactured with advantage of rubber or of a synthetic plastic material.

As regards the tensioning device it comprises, as indicated above, a string 9 secured by one end thereof to the ferrule 6' and by its other end to a handle 10 which is formed with a diametrical hole through which is passed the length of the string 9 attached to the ferrule 6'.

The diametrical hole formed in the handle 10 is substantially of the same diameter as that of the string 9 of the tensioning device.

In the following the use of the apparatus according to the invention is described.

Before it is used, the normally rodlike member must be prestressed or tensioned to assume the shape of an arc, as shown in FIG. 1. Such tensioning is effected by means of the adjustable or controllable tensioning device described above. In the use of the apparatus the rodlet 10, which constitutes the aforementioned handle, can take up different principal positions which are denoted in FIG. 1 by A, A' and A''. When the handle of the tensioning device is in the position A, the rodlike member is in tension or prestressed and assumes the position shown in FIG. 1. In that position the extreme ends 6 and 6' of the bent member are closest to one another and the patient who uses the device can now easily secure the traction elements (e.g. the anklets 11 and the head strap) to his body, as the lengths of string 17 and 18 which connect them with the

ferrules 6 and 6', respectively, are now slack. The user must see to it, however, that the string 9 remains under his or her arm, i.e. in a position in which the rodlet 10 can be seized with the hand for moving it to the position A' in which:

1) the radius of curvature of the flexed member is increased and, consequently, the ends 6 and 6' are more remote from one another;

2) the member is made to approach the patient laterally, under the effect of the tension which now acts on the body of the patient via the lengths of string 17 and 18, the ankle bands 11 and the headband 12, the apparatus thus assuming the position show in FIG. 4.

If the rodlet 10 is made by the patient to slide further to the position A'', i.e. to the position in which his or her arm is fully stretched, this has the effect of slackening the string 9 even more, so as to avoid that a relaxation of the string 17, 18 and of the traction elements attached to the patient's body may lead to the string 9 being subjected to tension again.

It is observed in this connection that during the traction exercises the handle 10 remains always within the range of the patient's hand owing to the fact that the string 9, depending on the extent to which it loses its tension, assumes more and more the position 9' (FIG. 4). Thus the patient can seize the handle 10 again at any moment, for either reducing or completely eliminating the traction force by placing the handle again into a position between A' and A.

Nevertheless, if the patient wishes to increase the effort of the traction exercised by the apparatus, when the handle is in the position A'', he holds the flexed member and, placing it above himself in a vertical plane, he exerts pull on the connector 3 by approaching the latter to his body. The patient may also hold the member with both hands so that is assumes a substantially helical shape, the elongated elements 1 and 1' rotating relative to the connector 3, because of the deformation. If the patient wishes to carry out intermittent traction exercises, with traction and relaxation alternating, he moves the connector 3 in alternation closer and away from his body. Alternatively, if he wishes to attain a prolonged traction effect, it will be sufficient to fasten the connector 3 to himself, e.g. by means of a strap or the like.

The apparatus takes up a limited space only since, when it is out of use, the patient or other user can easily dismantle its parts by first completely relaxing the tensioning device and then disconnecting the end portions 2 and 2' of the elements 1 and 1', respectively, from the connector 3 after first loosening or undoing the strings for the fixation of the tissue or fabric F which surrounds the connector.

The above described apparatus can also be used for carrying out traction transversely to the length of the patient's body. For this purpose the patient uses only the elongated elements 1 and 1' which he secures together by ties, e.g. by lengths of string or ligatures 13 and 13'. He also replaces the anklets, the abdominal or thoracic belts and the head strap, e.g. by bracelets 14 and 15 on short lengths of string 19 and 20, respectively, and he secures the length 19 to the free end 6' of the element 1' and the length 20 to 6'' to the rodlet 10 which constitutes the aforementioned handle. Also he reduces the length of the string 9, i.e. he adjusts the point of its attachment to the rodlet 10 in such a manner that the mutual distance between the bracelets 14 and 15 (FIG. 5) slightly exceeds the span of his arms. Thereafter he sets the member under tension by displacing the rodlet 10 in the manner shown in FIG. 6 and he engages the bracelets 14 and 15 with his wrists. After he has placed his hand in the bracelet 15, the patient seizes the handle 10 and allows the flexed member to expand until his arms are completely subjected to the stress exerted by said member, the maximum traction being obtained when the string 9 is completely expanded. In order to remove the stress, the patient allows one of the bracelets 14, 15 to escape or he returns the member to the position shown in FIG. 6 by the operation of the handle 10.

For adapting the apparatus to different figures of patients, it is possible to provide the member with a set of exchangeable connectors 3 of different lengths.

I desire it to be understood that I do not wish protection by Letters Patent to be limited to the aforedescribed details as these are capable of modification in various ways within the scope of the appended claims.

Thus, for instance, it will be understood that the strings serving for different purposes as set forth above, may be replaced by equivalent elements such as cords, chains or wires. Similarly, other parts of the apparatus may likewise be replaced by equivalent parts , or be made of other materials suitable for the purpose.

Thus, for instance, the cores 1 and 1' of the elongated elements may each consist of a rod of rigid, flexible material similar to a fishing rod. If so required, these elements may consist of two or more parts.

Substantially truncated conical shape of the elongated elements is preferred, although it would be possible to use cylindrical elements instead.

Whenever in this specification and in the appended claims reference is made to a specific part, element or member of the apparatus, it is obvious that such reference also encompasses any functionally equivalent part, element or member.

Similarly, whenever a specific material is, or specific materials are referred to in the foregoing description and in the appended claims, for use in the manufacture of any part, element or member of the apparatus according to the invention, it is to be understood that such reference also encompasses any functionally equivalent material or materials.

I claim:

1. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements or considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, the tensioning device further comprising a handle for its operation said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped at least over the major part of its length and is made of glass fibre material, and the said handle is provided with a hole through which the section of the cord attached to the free end of said first-mentioned elongated element is passed.

2. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of

the other elongated element the block including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, and wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material and the said handle is provided with a hole through which the section of the cord attached to the free end of said first-mentioned elongated element is passed.

3. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein further the cylindrical end portion of each elongated element is provided with a reinforcement made of a soft elastomeric material, said reinforcement having a peripheral groove arranged about midlength in its surface.

4. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein the cylindrical end portion of each elongated element is provided with a reinforcement made of a pliant and soft material, said reinforcement having a peripheral groove arranged about midlength in its surface, the said elongated elements and the connector being each surrounded by padding which, in turn, is enclosed by a sheath, the padding on the connector and on an elongated element also engaging the opposite ends of the reinforcement provided on said element.

5. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein the cylindrical end portion of each elongated element is provided with a reinforcement made of a soft elastomeric material, said reinforcement having a peripheral groove arranged about midlength in its surface, the said elongated elements and the connector being each surrounded by padding which, in turn, is enclosed by a sheath of fabric, the padding on the connector and on an elongated element also engaging the opposite ends of the reinforcement provided on said element.

6. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein the cylindrical end portion of each elongated element is provided with a reinforcement made of a pliant and soft material, said

reinforcement having a peripheral groove arranged about midlength in its surface, the said elongated elements and the connector being each surrounded by padding which, in turn, is enclosed by a sheath, the padding on the connector and on an elongated element also engaging the opposite ends of the reinforcement provided on said element, and wherein, further the free end of each elongated element is provided with a ferrule the peripheral surface of which has two mutually spaced peripheral grooves, one of said grooves serving for the fixation thereto of one end of the sheath covering the respective elongated element whereas the other groove serves for the fixation to said free end of the tensioning device and of a selected traction element.

7. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, the tensioning device further comprising a handle for its operation said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped at least over the major part of its length and is made of glass fibre material, and the said handle is provided with a hole through which the section of the cord attached to the free end of said first-mentioned elongated element is passed, the traction elements including at least one of the following for selective use: a pair of anklets, a head strap, an abdominal belt, a thoracic belt, a pair of bracelets.

8. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element the block including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, and wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material and the said handle is provided with a hole through which the section of the cord attached to the free end of said first-mentioned elongated element is passed, the traction elements including at least one of the following for selective use: a pair of anklets, a head strap, an abdominal belt, a thoracic belt, a pair of bracelets.

9. An apparatus for traction exercises including a substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portions of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein the cylindrical end portion of each elongated element is provided with a reinforcement made of a pliant and soft material, said reinforcement having a peripheral groove arranged about midlength in its surface, the said elongated elements and the connector being each surrounded by padding which, in turn, is enclosed by a sheath, the padding on the connector and on an elongated element also engaging the opposite ends of the reinforcement provided on said element, the traction elements including at least one of the following for selective use: a pair of anklets, a head strap, an abdominal belt, a thoracic belt, a pair of bracelets.

10. An apparatus for traction exercises including s substantially rodlike member to which traction elements of different type can be selectively attached, the apparatus being characterized in that said substantially rodlike member comprises two elongated elements of considerable elasticity, flexibility and tensile strength, said two elongated elements being connected lengthwise with one another and their free ends being designed to enable the attachment to said member of selected traction elements, the apparatus further including a tensioning device secured between the free ends of said elongated elements in such a manner that these elongated elements can be subjected to prestress by the said tensioning device before the apparatus is used, wherein at least the end portions of said elongated elements remote from the free ends of the latter, are cylindrical, and the substantially rodlike member includes a substantially tubular connector the opposite end portion of which pivotably accommodate each the cylindrical end portion of one of said elongated elements, wherein said tensioning device comprises a cord attached to the free end of one of said elongated elements, a pulley block attached to the free end of the other elongated element and including a pulley over which said cord is passed, and a handle for the operation of the tensioning device said handle being secured to the second end of said cord and being displaceable along the section of the cord attached to the free end of said first-mentioned elongated element, wherein each of said elongated elements is substantially truncated cone-shaped beyond the cylindrical end portion thereof and is made of glass fibre material, and wherein the cylindrical end portion of each elongated element is provided with a reinforcement made of a pliant and soft material, said reinforcement having a peripheral groove arranged about midlength in its surface, the said elongated elements and the

connector being each surrounded by padding which, in turn, is enclosed by a sheath, the padding on the connector and on an elongated element also engaging the opposite ends of the reinforcement provided on said element, and wherein, further, the free end of each elongated element is provided with a ferrule the peripheral surface of which has two mutually spaced peripheral grooves, one of said grooves serving for the fixation thereto of one end of the sheath covering the respective elongated element whereas the other groove serves for the fixation to said free end of the tensioning device and of a selected traction element, the traction elements including at least one of the following for selective use: a pair of anklets, a head strap, an abdominal belt, a thoracic belt, a pair of bracelets.