(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 518 829 A1**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **92830277.7**

(51) Int. Cl.5: **A63K 3/04**

(22) Date of filing: **28.05.92**

(30) Priority: **13.06.91 IT AN910017**

(43) Date of publication of application:
16.12.92 Bulletin 92/51

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR LI LU MC NL PT SE

(71) Applicant: **Tomellini, Garzia Dario**
Via Caetana, 13
I-00178 Roma(IT)

(72) Inventor: **Tomellini, Garzia Dario**
Via Caetana, 13
I-00178 Roma(IT)

(74) Representative: **Baldi, Claudio**
Piazza Ghislieri, 3
I-60035 Jesi (Ancona)(IT)

(54) Equestrian jump.

(57) The instant invention concerns a connecting and supporting joint, to be used in the construction of equestrian jumps, obtained by the blocking of two identical, square sectioned flanges (2), each of which has a hole (3) at the centre, surrounded by a peripheral collar (3a) , from which there extend radially - at intervals of 90° - four semi-cylindrical profiles (4) connected and joined by the same number of triangular sectioned gusset plates (5).

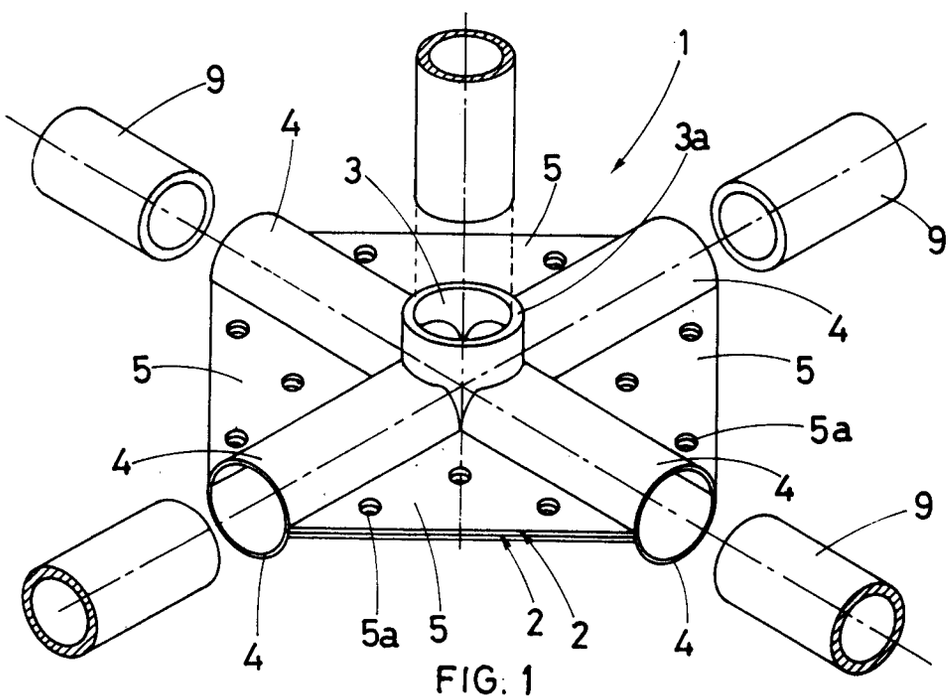


FIG. 1

EP 0 518 829 A1

The instant patent application for an industrial invention concerns a connecting and supporting joint, to be used in the construction of equestrian jumps.

As is known, equestrian jumps are composed of one or more horizontal bars or barriers which must be cleared by the horse.

In their most traditional form, said jumps consist of a pair of upright posts to support said bars : in this case, the posts are maintained in a vertical position by means of large support plates fitted at their bottom end, while the horizontal bars are supported in their turn, by brackets applied along the aforementioned posts.

An alternative to this type of jump is to use - more often during practice or on country paths with fixed obstacles - "easel" type lower jumps, in which the horizontal bar is sustained in position by means of two lateral pairs of inclined legs, which cross each other at their respective top ends.

Up to the present, in order to construct these two different types of jump, specific and distinct connecting and support means have been used, which definitely did not have the quality of being interchangeable; in other words, with the exception perhaps of the horizontal bars, no other component used in competition jumps could be used to assemble "easel" type jumps and vice-versa.

The basic idea of the instant invention was to provide for the first time, an article, the structure of which is extremely simple and economical, able to be used with the same success, both in the construction of conventional jumps used in competition and of lower "easel" type jumps.

The advantages of the introduction of such a versatile article are easy to comprehend and not only for the manufacturer of jumps with regard to reducing general production costs, but also for the users of such articles, with reference to the greater flexibility of use and the fact that assembly/disassembly operations are simplified.

In particular, the joint in question can be used both for jumps used in competition, as a supporting frame for the posts, and for "easel" type jumps, as a connecting element between each lateral pair of criss-crossed legs and the end of the horizontal bar which said pair of legs sustains.

The new joint in question has a modular structure, it being designed for the stable union of two identical square flanges, each of which has a central collar which surrounds a circular through-hole, to which four semi-cylindrical profiles are connected, which extend radially from said central collar, at 90° intervals.

To improve the strength and stability of such a flange, it is provided that the four aforementioned radial profiles be joined and connected to each other by the same number of triangular gusset plates, on the surface of which there are holes in which to insert screws or other equivalent means to fix one flange of this type to another identical flange.

It is obvious that two flanges of this kind have to be fixed as though they were the valves of a shell, that is to say, with their respective concave surfaces facing each other, in such a way that the semi-cylindrical radial profiles of one flange, on joining the corresponding radial profiles of the other flange, can create - in the joint obtained by assembling said flanges - four cylindrical sleeves.

In other words, the article which is obtained by assembling two flanges of the type described, has a central through-hole, bound by a collar, at a point corresponding to each face of the joint, and four radial equally distanced sleeves, which alternate with an equal number of triangular gusset plates of double thickness, at which point there are provided stable and reciprocal fixing means.

It is obvious that a joint formed in this manner requires that the axis of the central hole and the axes, in their turn perpendicular to each other, of the radial cylindrical sleeves, be orthogonal.

Said structure ensures that the joint in question has that valuable versatility previously mentioned due to the fact that it can be used both in the horizontal position, as a supporting frame for the vertical posts of a jump to be used in competition (it being provided that in this case the lower end of the post is inserted within the central hole, on the vertical axis of the joint) and as a connecting element between the lateral end of a horizontal bar and the top ends of the criss-crossed pair of legs supporting an "easel" type of jump.

In particular, in the latter case, the lateral end of the horizontal bar will have to be inserted within the central hole of the joint, while the two supporting legs will have to be inserted each at a point corresponding to the two consecutive sleeves of the joint.

In this particular case, it is provided that legs of different lengths can be inserted in the four radial sleeves of the joint, in such a way that, by simply rotating the joint, it is possible to choose on each individual occasion, the pair of inclined legs which are to rest on the ground; obviously this simple operation makes it possible to modify the height of the horizontal bar from the ground, as required.

This last feature increases even further the inventive value and the general functionality of the article according to the invention, given the fact that until now in order to modify the height of easel type jumps, it was always necessary in any case, to carry out the rather more complex and time-consuming operation of completely substituting both the lateral pairs of inclined supporting legs.

Moreover, it should be noted that should the

article in question need to be used as a supporting frame for a post, it is provided that one of the two flanges of which it is composed, in particular the one which has to occupy the lower position in contact with the ground, has its central hole sealed off.

As a result of this detail, the lower end of the post, after fitting perfectly into the central hole of the top flange, comes to rest on the internal face of the flange below, at a point corresponding to the wall which seals off its central hole; the application of this flange with its hole sealed off has been provided especially to stop the lower end of the post from also crossing the body of the flange below and thereby, from resting directly on the ground below.

When the article is used as a frame, it is also provided that arms be fitted into the four radial sleeves, in order to widen the support base and therefore increase stability of the post.

It should also be noted that whenever the joint in question is to be used as a joining element in "easel" type jumps, the two flanges of which it is composed will both have central through-holes, in such a way that the end part of the horizontal bar to be sustained can cross both of these, positioning itself on the outside of the joint.

For further clarity of explanation, the description of the invention continues with reference to the enclosed drawings included for illustrative and not limitative purposes, wherein ;

- Figure 1 is an axonometric representation of the joint according to the invention;
- Figure 2 shows the joint in question in the verion used as a frame for a post, sectioned along the plane passing through the longitudinal axis of a pair of coaxial sleeves;
- Figure 3 shows the joint in question in use as a connecting element between the horizontal bar and the criss-crossed legs of an equestrian "easel" type jump;
- Figure 4 is the side view of Fig.3;
- Figure 5 is the section of Fig.4 along the V-V plane; With reference to the attached drawings, the joint (1) in question, is made up of two identical square-shaped flanges (2), which are blocked one against the other, with their concave surfaces facing each other.

At the centre of each of these flanges (2), there is a hole (3), surrounded by a peripheral collar (3a), it being provided that from said collar (3a) there extend radially - at 90° intervals - four semi-cylindrical profiles (4), connected and united by the same number of triangular gusset plates (5).

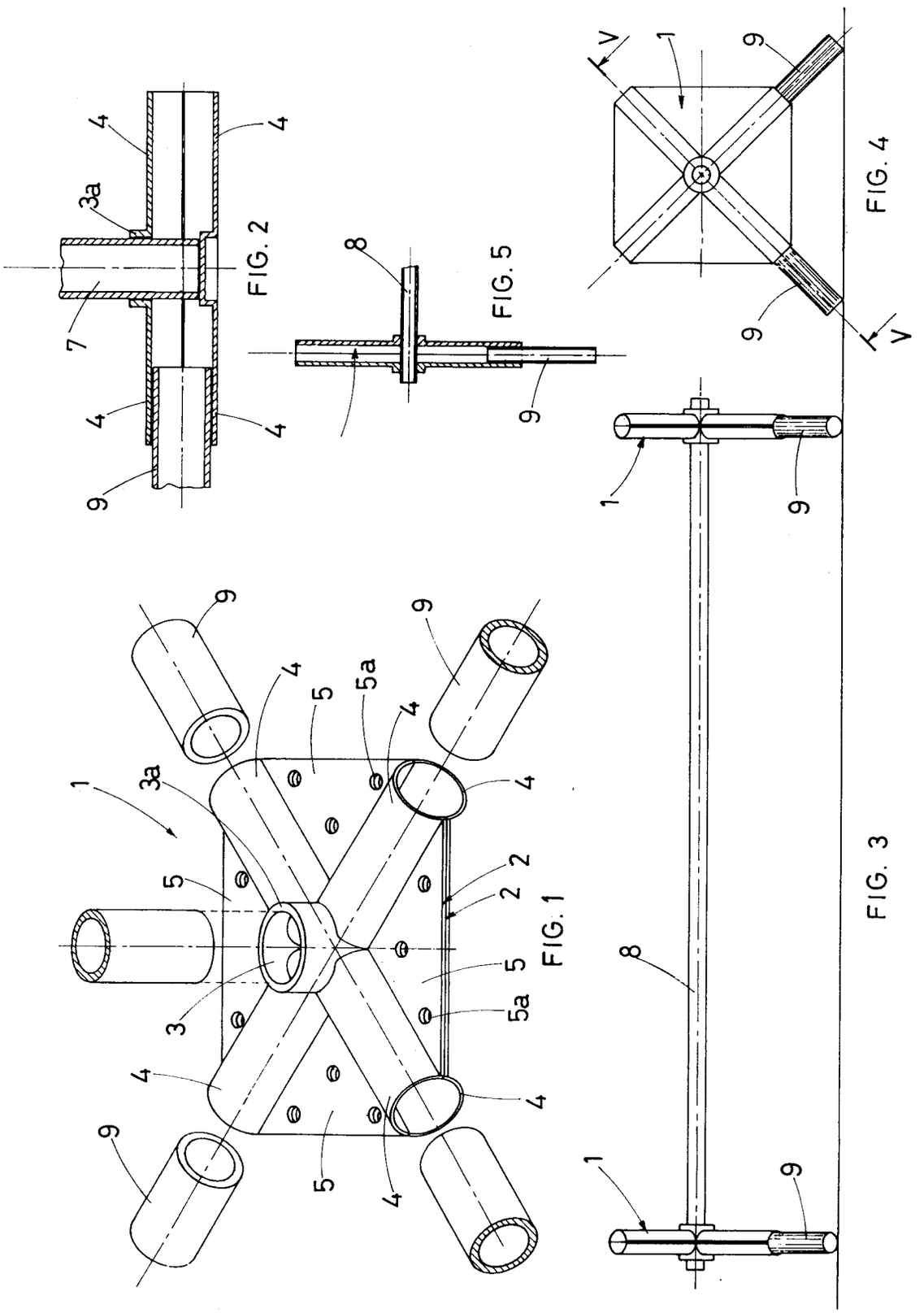
As mentioned, the blocking in place of the pair of flanges (2), is effected by means of screws or other suitable means, which are used on the through-holes (5a), which are on the surface of the aforementioned gusset plates (5).

Figure 2 illustrates the use of the joint in question (1) as a support base for a post (7) of a jump to be used in competition; it is again underlined that in this case, the flanges (2) used to make up the joint (1), differ in that the top flange has a through-hole (3) as usual, but in the lower flange, this hole is sealed off by a wall. Figures 3, 4 and 5, illustrate the use of the joint in question (1), as a connecting element between the horizontal barrier (8) and the criss-crossed leg (9) of an "easel" type jump; in this embodiment both the flanges (2) have identical central through-holes (3).

Claims

1. Connecting and supporting joint to be used in the construction of equestrian jumps, characterised by the fact that it is made up of two identical square-shaped flanges (2), which are blocked one against the other, with their respective concave surfaces facing each other; it being provided that at the centre of each flange (2), there is a hole (3), surrounded by a peripheral collar(3a), from which there extend radially - at intervals of 90° - four semi-cylindrical profiles (4), connected and united by triangular gusset plates (5), where there are holes (5a) to put screws or other fixing means through; in order to ensure the stable coupling of a pair of similar flanges (2);

2. Connecting and supporting joint to be used in the construction of equestrian jumps, according to claim 1, and characterised in an alternative embodiment, by the fact that one of the flanges (2) used, has its central hole sealed off by a wall.


1
2
3
3a
4
5
5a
9
FIG. 1
4
3a
7
9
FIG. 2
8
9
FIG. 5
V
1
9
FIG. 4
1
8
9
FIG. 3

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 92 83 0277

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)
A	GB-A-1 561 869 (WOLFGANG MAUS)		A63K3/04
A	AU-A-7 093 374 (RENZOW) * figures 2,4 *		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A63K A63B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	07 SEPTEMBER 1992	MARTIN A.G.M.

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

EPO FORM 1503 03.82 (P0401)