

602669

\$140

COMMONWEALTH OF AUSTRALIA

Patents Act 1952

APPLICATION FOR A STANDARD PATENT

(Combined Form - Convention and Non-Convention)

~~1/~~We JOUBERT S.A., a French Body Corporate, of

Champ de Clure 63600 AMBERT - FRANCE,.....

 hereby apply for the grant of a Standard Patent for an invention entitled
"The Hook Particularly Rubber Spring Hook".....

 which is described in the accompanying ~~Provisional~~ Complete Specification.

2. ~~This application is a convention application and is based on the application(s) for a~~
~~patent or similar protection made -~~
 in
 on, numbered, and
 on, numbered, and
 on numbered

Strike out para. 2.
 for non-convention

3. My/Our address for service is: Care of COWIE, THOMSON & CARTER, Patent
 Attorneys, of 71 Queens Road, Melbourne, Victoria 3004, Australia.

DATED this 29th day of January, 1987.

To The Commissioner of Patents
 COMMONWEALTH OF AUSTRALIA

COWIE, THOMSON & CARTER

By: 

Patent Attorneys for
JOUBERT S.A.

APPLICATION ACCEPTED AND AMENDMENTS

ALLOWED 8 - 8 - 90

COWIE, THOMSON & CARTER

Patent Attorneys
 71 Queens Road, Melbourne,
 Victoria, 3004, Australia

PATENT DECLARATION FORM
(CONVENTION OR NON-CONVENTION)

DECLARATION IN SUPPORT OF APPLICATION FOR A PATENT

Insert name of
applicant.In support of the application made by IOUBERT S.A.
Champ de Clure, 63600 AMBERT, FRANCEInsert title of
invention.for a patent for an invention entitled: THE HOOK, PARTICULARLY RUBBER SPRING HOOKInsert full name(s)
and address(es) of
person(s) making
declaration. If
applicant a company,
person must be
authorised to make
declaration.I/We Thierry IOUBERT
Impasse Foch, 63600 AMBERT, FRANCEDelete alternatives
which do not apply

do solemnly and sincerely declare as follows:

- * 1. ~~(a) I am/We are the applicant(s) for the patent.~~
- * OR (b) I am authorized by the abovementioned applicant to make this declaration on its behalf.

- * 2. ~~(a) I am/We are the actual inventor(s) of the invention.~~
- * OR (b)

BICHARD Bernard, 11 Villeneuve, 63600 AMBERT, FRANCE
IOUBERT Antoine, Le Champ de Clure, 63600 AMBERT, FRANCE
IOUBERT Jean, Le Champ de Clure, 63600 AMBERT, FRANCE
IOUBERT Thierry, Impasse Foch, 63600 AMBERT, FRANCE

Insert name(s) and
address(es) of actual
inventor(s).Insert details of
entitlement to apply,
e.g. Applicant is
assignee of inventor(s)

is/are the actual inventor(s) of the invention and the facts upon which the applicant(s) is/are entitled to make the application are as follows:—

Applicant is the assignee of the invention from
the said actual inventors


Delete 3 and 4 if
application non-
convention.
Otherwise insert
details of basic
application(s).

3. The basic application(s) as defined by Section 141 of the Act was/were made in the following country or countries on the following date(s) by the following applicant(s)
- | | | |
|----------|----------|----------|
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |
| in _____ | on _____ | 19 _____ |
| by _____ | | |

4. The basic application(s) referred to in paragraph 3 of this Declaration was/were the first application(s) made in a Convention country in respect of the invention the subject of the application.

Place and date of
Signature.Declared at AMBERT this 8 day of JANUARY 19 87NO ATTESTATION
OR SEALThierry IOUBERT
(MANAGER)

Signature(s) of declarant(s).

To: The Commissioner of Patents,
Australia

(12) PATENT ABRIDGMENT (11) Document No. AU-B-68130/87
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 602669

(54) Title
HOOK

International Patent Classification(s)
(51)⁴ F16B 045/00

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(56) Prior Art Documents
AU 19744/70 58.1
AU 442217 57343/69 57.3
AU 400292 68114/65 58.1

(57) Claim

1. A hook for fastening a tie, comprising a fixing block to which the tie is attached, an open hooking loop, an arm of which is integral with the fixing block and another arm of which is free and has a gripping means formed by a nose which is directed toward the base of the loop and which is capable of entering a recess in a part of the fixing block, thereby closing the loop, the nose being substantially pointed and the recess being provided with a corresponding hollow shape whereby the nose self-centers in the recess.



602669

Form 10

PATENTS ACT 1952-1973

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE

Class:

Int. Cl:

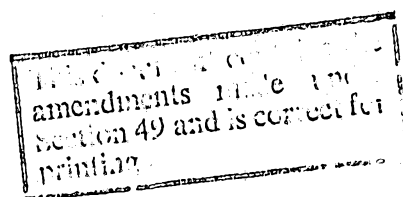
 Application Number:
 Lodged:

68130/87

Complete Specification—Lodged:
 Accepted:
 Published:

Priority:

Related Art:

**TO BE COMPLETED BY APPLICANT**

Name of Applicant: JOUBERT S.A., a French Body Corporate, of
 Champ de Clure 63600 AMBERT - FRANCE

Address of Applicant:

Actual Inventor: Bernard Bichard, Antoine Joubert
 Jean Joubert, Thierry Joubert

COWIE, THOMSON & CARTER

Address for Service:

PATENT & TRADEMARK ATTORNEYS

71 QUEENS ROAD

MELBOURNE, 3004, AUSTRALIA

Complete Specification for the invention entitled:

"The Hook, Particularly Rubber Spring Hook"

The following statement is a full description of this invention, including the best method of performing it known to me:—

- 1 -

*Note: The description is to be typed in double spacing, pica type face, in an area not exceeding 250 mm in depth and 160 mm in width, on tough white paper of good quality and it is to be inserted inside this form.

The invention relates to a hook for hitching a tie, especially an elastic tie, such as an elastic cable or strap and particularly for hitching a rubber spring.

5 Hooks which are attached to a cable or a rigid elastic strap, e.g., hooks attached to luggage retaining nets or mono- or multi-filament luggage straps, are generally formed by a simple bent steel wire, which may become prematurely disengaged and which may injure the user.

The invention aims to provide a hook which cannot become unintentionally disengaged, whilst remaining easy to use and to remove, preferably a hook, the opening of which requires the application of a force counter to the pull of the tie upon the hook.

15 According to the present invention there is provided a hook for fastening a tie, comprising a fixing block to which the tie is attached, an open hooking loop, an arm of which is integral with the fixing block and another arm of which is free and has a gripping means formed by a nose which is directed toward the base of the loop and which is capable of entering a recess in a part of the fixing block, thereby closing the loop, the nose being substantially pointed and the recess being provided with a corresponding hollow shape whereby the nose self-centers in the recess.

20 The fixing block preferably has a passage in which the tie is received and the recess of the block is oriented to extend in the opposite direction to the direction of introduction of the tie into the said passage.

25 Other characteristics and advantages of the invention will be better understood from reading the description which now follows and which refers to the accompanying drawings given solely by way of illustration, and wherein:



FIG. 1 is a perspective view of a hook according to a first embodiment of the invention, shown in the open position ;

5 FIG. 2 is a perspective view showing the hook of FIG. 1 in the open position at a stage before its closure ;

FIG. 3 is a perspective view showing the hook of FIGS. 1 and 2 in the closed position ;

10 FIG. 4 is a sectional view of a hook according to another embodiment of the invention, shown in the closed position ;

FIG. 5 is a perspective view showing the hook of FIG. 4 in the open position ; and

15 FIG. 6 is another perspective view of the hook of FIGS. 4 and 5.

FIGS. 1 to 3 illustrate a hook 10 according to the invention intended to be attached to a bar 12 forming part, e.g., of a motor vehicle roof rack.

20 The head 10 comprises an anchorage block 14, which may be of any shape, but as shown is generally spherical, provided with a through passage oriented along a diameter of the sphere and intended for the anchorage of an elastic cable 16. This through passage issues to the outside by opposed circular apertures 18 and 20, the aperture 18 having a smaller diameter than the aperture 20 to permit the end of the cable 16 to be folded and attached to itself to prevent its escape from the anchorage block 14.

25 The hook 10 also comprises a part forming a retaining loop 22 having substantially the shape of a U and comprising an arm 24, the end 26 of which is

30

integral with the anchorage block 14, and an arm 28, the end 30 of which is free and provided with a turned-back nose 32 directed towards the base of the U. The arms 24 and 26 are connected together by a substantially circular rounded part 34 forming the actual loop.

The arms of the loop are flat and thick and bear flat against the anchorage block 14, which is located between the arms.

The nose 32 can be engaged in or disengaged from a recess 42 in the block in order to effect the closure of the hook (FIG. 3) or the opening of the hook (FIGS. 1 and 2) respectively.

The recess 42 is bounded on the nose side by a front wall 36 which, in the closed position of the hook (FIG. 3), engages like a catch in a space 40 included between the nose 32 and the arm 28 of the loop.

The recess 42 has a shape corresponding to that of the nose 32, but hollow, so that these two elements can co-operate closely in the closed position as illustrated in FIG. 3.

In the embodiment of FIGS. 1 to 3, the nose 32 has the shape of a point, or more precisely of a slightly obtuse angle oriented towards the base of the U. This point is contained in a plane perpendicular to the plane defined by the two arms 24 and 28 of the retaining loop 22. This ensures self-centering of the nose in the recess.

It will be observed that the flange 38 of the wall 36 exhibits a vee-shaped cut similar to the shape of the point of the nose 32.

The hooking element 36 and the point of attachment of the end 26 of the arm 24 with the anchorage block 14 are arranged symmetrically of the sphere with reference to the through passage so that, in the closed position of the hook (cp., FIG. 3), the two arms 24 and 28 of the U are substantially parallel with the through passage and therefore parallel with the direction of the cable 16.

The hook shown in FIGS. 1 to 3 is advantageously produced as a one piece moulding in a plastics material. The arms of the loop are rigid but the loop permits the free arm to be moved away so that the nose 32 can be engaged in (or disengaged from) the hooking element 36.

The device is used in the following manner.

The hook in the open position is engaged round the rack element 12 as shown in FIG. 1. The anchorage block 14 and the retaining loop 22 are then brought together manually by placing e.g., the thumb (P) on the anchorage block 14 and the index finger (I) on the rounded base 34 of the retaining loop so as to bring the nose 32 closer to the hooking element 36, as shown in FIG. 2.

As soon as the nose 32 is positioned opposite the hooking element 36, the tension exerted by the thumb and index finger is relaxed so that the nose 32 enters the recess 42. It will be observed that the pointed shape of the nose 32 favours its centering within the recess 42. This also prevents any lateral unlocking on the hook resulting from a lateral displacement of the nose 32

relative to the recess 42. It will be noticed in FIG. 3 that any force F exerted upon the hook 10 through the intermediary of the cable 16 tends to favour the co-operation of the nose 32 and of the hooking element 36 and that, in order to disconnect the nose 32 from this hooking element 36, it is necessary to exercise upon the retaining loop a force directed in the opposite direction to the force F.

FIGS. 4 to 6 illustrate a hook which differs from that of FIGS. 1 and 3 solely by the presence of a handle ring 44 attached to the arm 24 which is connected to the anchorage block 14. The function to this ring is to facilitate the traction of the cable 16 as shown e.g., in FIG. 5.

It will be observed in the section, FIG. 4, that the end of the cable 16 is folded upon itself and maintained by means of a metal binding 46. With this arrangement, it is impossible for the cable to escape from the anchorage bloc 14.

The invention is not limited to the embodiment described and illustrated, to which the expert may apply variants of detail.

Thus the anchorage block, the shape of which is not limitative but is preferably chosen from among the shapes easy to obtain by moulding, may have e.g., the shape of a conic frustum or of a pyramidal frustum. The block may also have various recesses of lateral flats.

The invention is also not limited to any particular method of anchorage of the cable to the anchorage bloc: Metal binding or ring on the folded end of the cable, ring crimped of the straight and unfolded end of the cable, etc.

The claims defining the invention are as follows:-

1. A hook for fastening a tie, comprising a fixing block to which the tie is attached, an open hooking loop, an arm of which is integral with the fixing block and another arm of which is free and has a gripping means formed by a nose which is directed toward the base of the loop and which is capable of entering a recess in a part of the fixing block, thereby closing the loop, the nose being substantially pointed and the recess being provided with a corresponding hollow shape whereby the nose self-centers in the recess.
2. A hook according to claim 1, wherein the recess is bounded on the side of the said other arm by a front wall which has an edge with a V-shaped cutout to facilitate introduction of the nose into the recess.
3. A hook according to any one of claims 1 and 2, characterized in that the block is located between the said arms.
4. A hook according to any one of claims 1 to 3, characterized in that said arms are flat.
5. A hook according to any one of claims 1 to 4, characterized in that said arms bear flat against the block.
6. A hook according to any one of claims 1 to 5, characterized in that the block is provided with a through passage for the tie.



7. A hook according to anyone of claims 1 to 6, characterized in that said recess in the block is turned in the opposite direction to the direction of introduction of the tie into said through passage.

5 8. A hook according to anyone of claim 6 or claim 7, characterized in that said through passage is disposed on the axis of the loop, and that the arms of the loop are substantially symmetrical with respect to said through passage.

10 9. A hook according to anyone of claims 1 to 8, characterized in that one of said arms carries a handle ring.

10. A hook according to anyone of claims 1 to 9, characterized in that the block has the general shape of a sphere and that the loop forms a U, the arms of which respectively terminate in two diametrically opposed zones of the sphere.

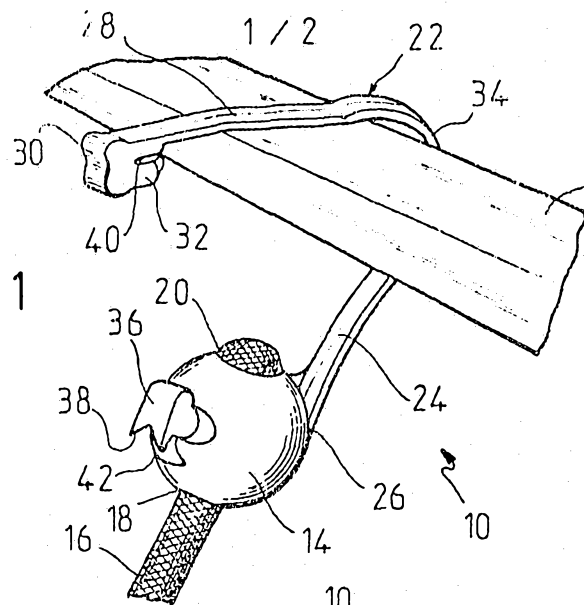
11. A hook according to anyone of claims 1 to 10, characterized in that it is moulded in plastics material.

12. A hook substantially as hereinbefore particularly described with reference to any one or more of the drawings.

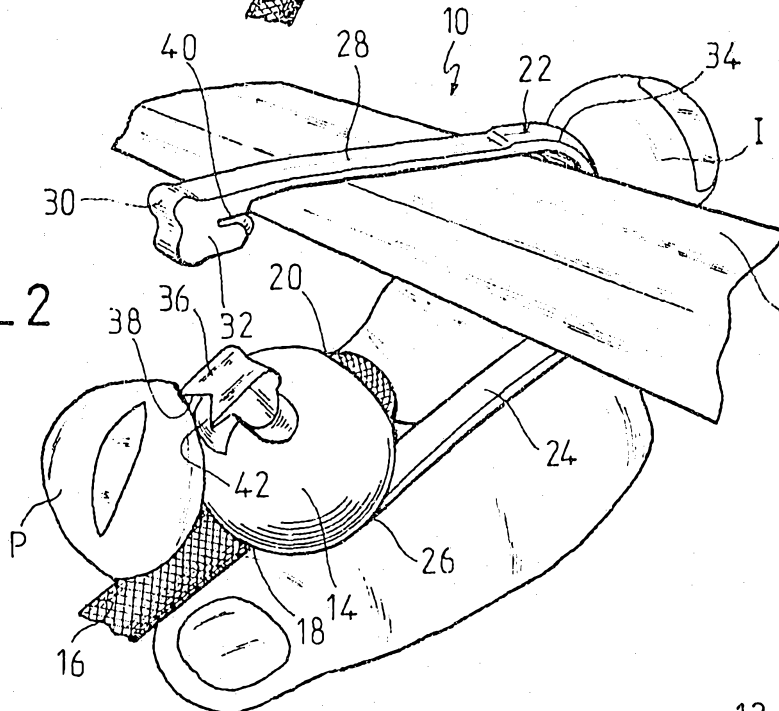
DATED this 29th day of January, 1967.

JOUBERT S.A.

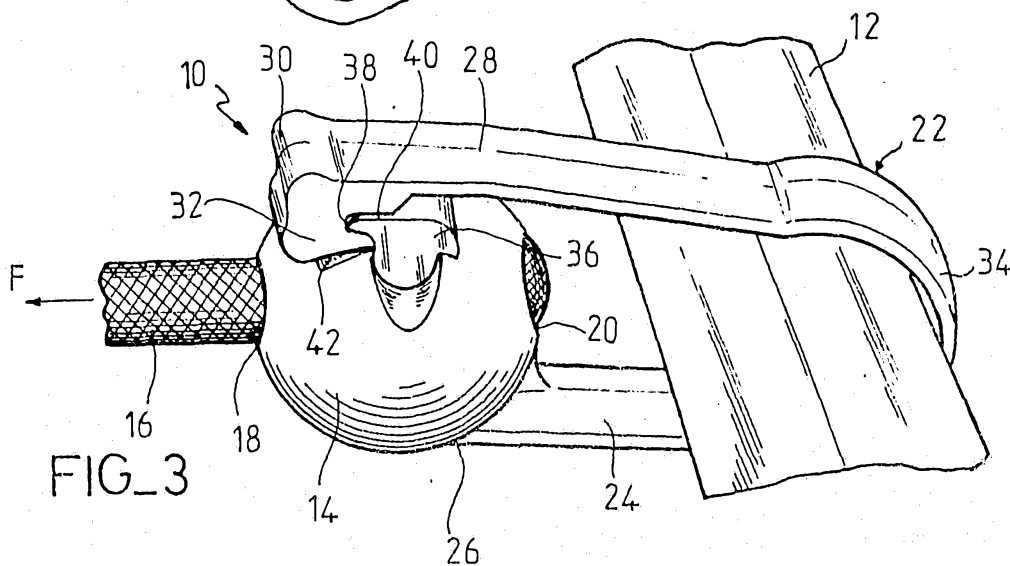
FIG_1



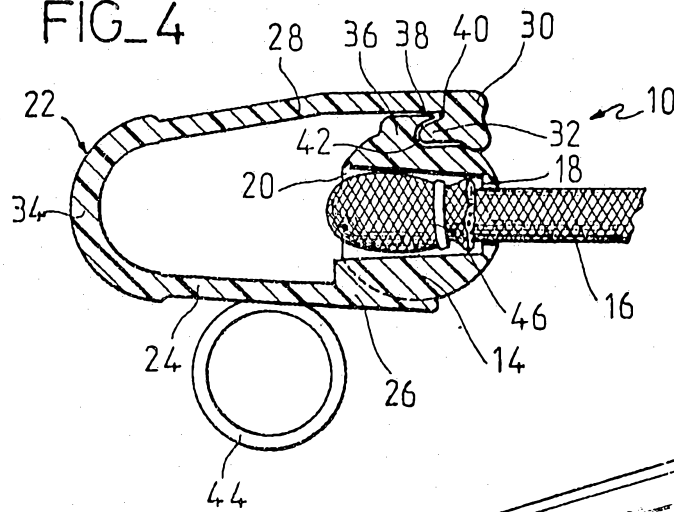
FIG_2



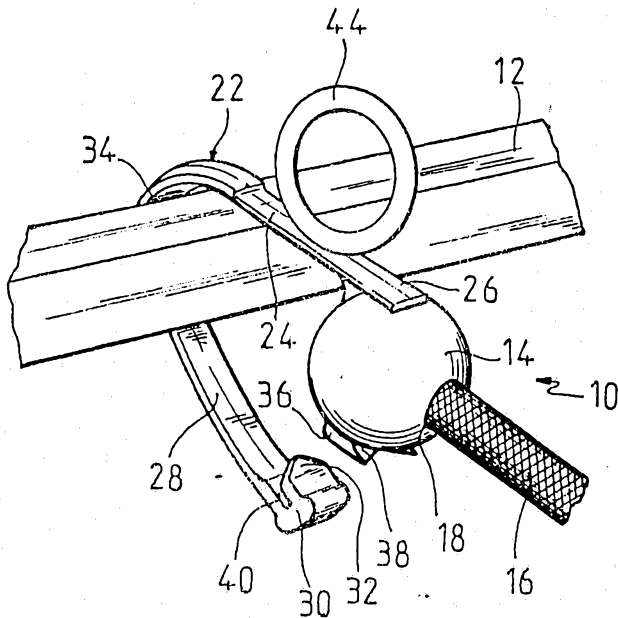
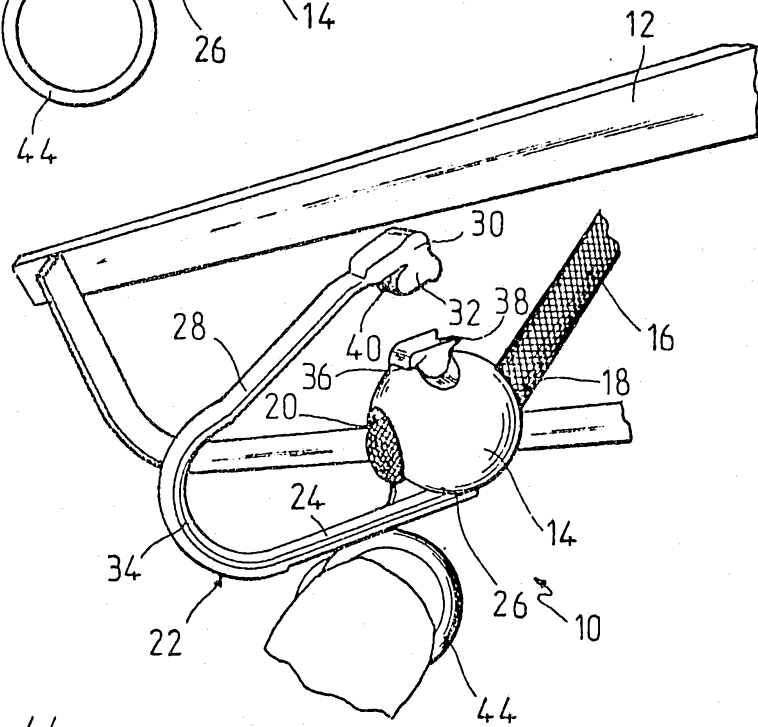
FIG_3



FIG_4



FIG_5



FIG_6