

(19)



(11)

EP 2 627 840 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

30.07.2014 Bulletin 2014/31

(51) Int Cl.:

E04H 17/16^(2006.01)

(86) International application number:

PCT/EP2011/005064

(21) Application number: **11770056.7**

(22) Date of filing: **11.10.2011**

(87) International publication number:

WO 2012/048843 (19.04.2012 Gazette 2012/16)

(54) **FENCE**

ZAUN

CLÔTURE

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **12.10.2010 BE 201000600**

(43) Date of publication of application:

21.08.2013 Bulletin 2013/34

(73) Proprietor: **Betafence Holding NV**

8550 Zwevegem (BE)

(72) Inventor: **VALETTE, Stefaan**

B-9000 Gent (BE)

(74) Representative: **Hostens, Veerle et al**

KOB NV

Patents

President Kennedypark 31 C

8500 Kortrijk (BE)

(56) References cited:

EP-A1- 1 306 502 EP-A1- 2 055 866

EP-A2- 1 736 617 BE-A3- 1 017 701

EP 2 627 840 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

[0001] The present invention relates to a fence comprising at least one fence panel which is in the form of a wire panel comprising horizontal wires which, in the installed position of the fence, extend substantially horizontally and vertical wires which, in the installed position of the fence, extend substantially vertically and comprising at least one fence post which comprises at least one upright hook element over which at least one horizontal wire can be hooked in order to hold said horizontal wire for attaching the fence panel to the fence post.

[0002] In order to create fences, wire panels are often attached to fence posts. This usually involves the use of clamping rings, brackets, adapted clamping pieces etc., with a wire panel being clamped between these clamping rings, brackets, clamping pieces, etc. and the fence post, thus necessitating the use of screwdrivers or other accessories when fitting the fence.

[0003] A plurality of fence posts have already been developed which do not require the use of such accessories in order to attach wire panels to fence posts.

[0004] Thus, fences have been developed in which wire panels are attached to the fence posts using a hook system, where a vertical or a horizontal wire of a wire panel is in each case hooked to a fence post.

[0005] A drawback of fences in which the vertical wire is attached, such as for example the fence from EP 1 306 502 A1, is that the fence post comprises folded-over parts behind which the vertical wire is hooked and which are difficult to coat evenly.

[0006] The present invention relates to such fences in which the horizontal wire is hooked to a fence post. However, this makes it possible to attach fence panels to fence posts less securely and still allows for the simple detachment thereof. Therefore, an additional fastening means will often also be used in practice, such as that used with the fence from FR 2 923 248 A1 (or the respective patent application EP 2 055 866 A1) to complement such a hook system in order to attach the fence panels more securely to the fence posts and/or to render detachment more difficult or to prevent it. With the fence from FR 2 890 407 A3, no separate fastening means are used, but instead lips on the fence post are folded over with a specially developed hand tool after fitting of the panel. The reason for this is that it is not desirable for intruders to be able to easily overcome a fence by taking it down or for a fence panel to unexpectedly become detached, for example when a ball hits the fence with a relatively large force. Due to the presence of these lips, it is also difficult to coat this post evenly. In the fence as described in BE 1 017 701 A3, which comprises all of the features of the preamble of claim 1, downwardly directed hooks are hooked over horizontal wires in order to prevent detachment of the fence panels. In the fence as described in EP-A-2055866, which also comprises all of the features of the preamble of claim 1, the fence panels are secured by additional stirrup-shaped locking ele-

ments.

[0007] It is an object of the present invention to provide an alternative to such a fence with a hook system in which a horizontal wire of a wire panel is hooked to a fence panel, in which the post can be evenly coated in a simple manner and in which no additional accessories such as fastening means or hand tools are required in order to prevent the fence from being taken down.

[0008] This object of the invention is achieved by providing a fence comprising at least one fence panel in the form of a wire panel, comprising horizontal wires which, in the installed position of the fence, extend substantially horizontally and vertical wires which, in the installed position of the fence, extend substantially vertically and comprising at least one fence post, in which this fence post comprises at least one upright hook element onto which at least one horizontal wire can be hooked in order to hold this horizontal wire for attaching the fence panel to the fence post and in which this fence post comprises at least one detaining element which is integrally formed with this fence post in the form of a click element in order to click-fit a horizontal wire onto the hook element when the former is hooked into the hook element, for detaining the wire panel when an attempt is made to lift the wire panel from the installed position of the fence out of engagement with the hook element. In addition, it is readily possible to configure such a detaining element in such a manner that the fence post can be coated evenly.

[0009] If such a detaining element prevents the wire panel from being lifted out of engagement with an upright hook element after a horizontal wire has been hooked thereto, taking down of the fence is rendered more difficult while no additional accessories are required to achieve this.

[0010] Fences have already been developed in the prior art in which a vertical wire is click-fitted to a fence post. To this end, a certain force has to be used in each case to click-fit this wire panel to the fence post by a vertical wire. By click-fitting at least one horizontal wire, the force of gravity can be used in order to click-fit this wire, thus greatly reducing the force which has to be used to click-fit this fence panel.

[0011] More specifically, the fence post of a fence according to the invention with detaining element can comprise at least one flange and the hook element forms part of this flange and this hook element is formed by a slot which is provided at the end of this flange.

[0012] With a fence comprising a click element, this click element can then be formed by partly punching out a part of the flange at the location of the hook element and folding it over.

[0013] Alternatively, this click element can be formed by folding out a part of the flange at the location of the hook element.

[0014] When at least one hook element forms part of the flange and is formed by a slot which is provided at the end of the flange, this click element can alternatively also form part of the flange and be formed by providing

a local constriction in the slot.

[0015] A significant advantage of such an embodiment is that both the hook elements and the click elements can be formed together in a single process step during production.

[0016] More specifically, a fence according to the present invention may furthermore comprise a reinforcing pillar and a web plate connected thereto, with the flange being provided at the end of the web plate.

[0017] The flange is then preferably a folded-over flange, comprising a first part which extends virtually at right angles to the web plate and a second part which is directed substantially towards the reinforcing pillar.

[0018] If such a fence post is provided with click elements as detaining elements, the additional advantage of constructing a fence post in this way is that it can be formed in such a way that all parts of the flange remain readily accessible for the purpose of applying a protective coating, thereby significantly increasing the service life of the fence post compared to fence posts comprising click elements according to the prior art. With fence posts according to the prior art in which a vertical wire of a fence can be click-fitted to this fence post, not all locations are readily accessible in order to be able to apply a protective coating.

[0019] In an embodiment comprising a folded-over flange, the slot in the flange is preferably provided in the second part of the flange.

[0020] With the embodiments of a fence according to the present invention comprising a click element as detaining element which is formed by either partly punching out and folding over a part of the flange, or by folding a part of the flange, this click element is preferably provided in the first part of the flange. A slot and a click element are in this case provided at the location of one another. With an embodiment of a fence comprising a click element as detaining element which forms part of the flange and is formed by providing a local constriction in the slot, said click element is provided in the second part of the flange.

[0021] In a particularly preferred embodiment of a fence according to the present invention, the fence post comprises two flanges, each of which is provided with slots in order to form hook elements so as to hook horizontal wires of fence panels thereon.

[0022] In this case, the fence post is preferably of virtually symmetrical design.

[0023] The present invention will now be described in more detail by means of the following detailed description of some preferred embodiments of a fence according to the present invention. The aim of this description is solely to give illustrative examples and to indicate further advantages and features of this fence, and can therefore not be interpreted as a limitation of the area of application of the invention or of the patent rights defined in the claims.

[0024] In this detailed description, reference numerals are used to refer to the attached drawings, in which:

- **Fig. 1** shows a first embodiment of a fence according to the present invention with a fence panel which is attached between and to two fence posts, in perspective;
- **Fig. 2** shows a detail of the fence from Fig. 1 with a part of a fence post and a part of the fence panel which is attached to this fence post, in perspective;
- **Fig. 3** shows the fence from Fig. 1 in cross section, with a vertical section through the fence panel, in which the fence post is shown in side view;
- **Fig. 4** shows the part of the fence from Fig. 3 and denoted as detail A in Fig. 3 in more detail;
- **Fig. 5** shows a second embodiment of a fence according to the present invention with a fence panel which is attached between and to two fence posts, in perspective;
- **Fig. 6** shows a detail of the fence from Fig. 5 with a part of a fence post and a part of the fence panel which is attached to this fence post, in perspective;
- **Fig. 7** shows a fence post of the fence from Fig. 5 in side view;
- **Fig. 8** shows the part of the fence post from Fig. 8 and denoted as detail B in Fig. 8 in more detail;
- **Figs. 9 to 18** show, both in perspective view (Figs. 9, 11, 13, 15 and 17) and in plan view (Figs. 10, 12, 14, 16, 18), the various stages of the way in which a fence panel can be attached to a fence post in order to form a fence as illustrated in Fig. 5.

[0025] A fence (1) according to the present invention, as is illustrated in Fig. 1 and Fig. 5, comprises one or more fence posts (2) and one or more fence panels (3). Parts of this fence (1) are illustrated in more detail in the other figures.

[0026] The fence panels (3) are wire panels and comprise horizontal wires (3a) and vertical wires (3b) which have been welded to one another at the spots where they cross. These wires (3a, 3b) are preferably made from galvanised steel.

[0027] The illustrated fence posts (2) are posts which have been folded from sheet metal. Preferably, this sheet metal is galvanized steel. These fence posts (2) comprise a reinforcing pillar (7), a web plate (8) connected thereto and two folded-over flanges (9a, 9b). The folded-over flanges (9a, 9b) each comprise a first part (9a) which extends virtually at right angles to the web plate (8) and a second part (9b) which is directed substantially towards the reinforcing pillar (7). In addition, the illustrated fence posts (2) are of a symmetrical design, so that two fence panels (3) can be attached to this fence post (2) in such a manner that they are in line with one another.

[0028] The second parts (9b) of the flanges (9a, 9b) are in each case provided with downwardly directed slots (6) which end at the end of the flanges (9a, 9b) and into which a horizontal wire (3a) of a wire panel (3) can be fitted. These slots (6) delimit upright hook elements (4), onto which the horizontal wire (3a) can be hooked.

[0029] In the embodiment of a fence (1) according to

the present invention as illustrated in Figs. 1 to 4, parts (5) of the flange (9a, 9b) are partly punched out and folded in the first parts (9a) of the flanges (9a, 9b) at the location of the slots (6), as can best be seen in Fig. 4. These parts (5) form click elements (5) acting as detaining elements (5), by means of which the horizontal wire (3a) can be click-fitted in order to retain it in the respective hook element (4). These click elements (5) are punched out of the sheet metal and folded in such a way that they can be elastically deformed. They delimit a passage in the respective hook element (4) which is narrower than the diameter of a horizontal wire (3a). The slot (6) has a width which is greater than or equal to the diameter of the horizontal wire (3a). When a horizontal wire (3a) is hooked over a hook element (4), it can be pulled through the passage in this manner, in which case the click element (5) temporarily deforms elastically. In this case, the horizontal wire (3) can be pulled through this passage by using the force of gravity, optionally with the use of a small additional force. Thus, this horizontal wire (3a) can be click-fitted into the hook element (4) by means of the respective click element (5).

[0030] When a wire panel (3) has been attached to a fence post (2), this click element (5) forms an impediment when the fence panels (3) have to be detached. If a fence panel (3) in this installed position has to be lifted out of the hook element (4), the horizontal wire (3a) fitted in the hook element (4) hits this click element (5) which serves as a detaining element (5). Due to the design of the punched-out and folded-over parts as detaining elements (5), they deform elastically when the horizontal wire (3a) is hooked into the hook element (4), as a result of which this horizontal wire (3a) can easily be click-fitted. However, when trying to remove the wire panel (3), this detaining element (5) prevents this horizontal wire (3a) from being lifted out of engagement.

[0031] In the embodiment of a fence (1) according to the present invention as illustrated in Figs. 5 to 18, all slots (6) are provided with a constriction (11) which in each case forms a click element (5) in the flange (9a, 9b), as can best be seen in Fig. 7. These constrictions (11) form click elements (5) acting as first detaining elements (5) for this embodiment, by means of which the horizontal wire (3a) can be click-fitted in order to retain it in the respective hook element (4). To this end, the constrictions (11) in the illustrated embodiment are in each case provided at the end of the hook elements (4). These ends of the hook elements (4) can deform elastically. Each constriction (11) is narrower than the diameter of a horizontal wire (3a). The remainder of the respective slot (6) has a width which is greater than or equal to the diameter of the horizontal wire (3a). When a horizontal wire (3a) is hooked over a hook element (4), it can be pulled through the constriction (11) in this manner, in which case the end of the respective hook element (4) temporarily deforms elastically. In this case, the horizontal wire (3) can be pulled through this constriction (11) by using the force of gravity, optionally with the use of a

small additional force. Thus, this horizontal wire (3a) can be click-fitted into the hook element (4) by means of the respective click element (5).

[0032] In addition, the fence posts (2) of the embodiment from Figs. 5 to 18, at the ends of the second parts (9b) of the flanges (9a, 9b), in each case just above the slots (6), are provided with a lip (10) which is turned towards the web plate (8). This lip (10) serves as a second detaining element (10).

[0033] When a wire panel (3) of such an embodiment is attached to a fence post (2), this lip (10) forms an additional obstacle when trying to detach the fence panels (3). On the one hand, if a fence panel (3) in the installed position is to be lifted out of the hook element (4), the horizontal wire (3a) which is arranged in the hook element (4) hits the click element (5), as can clearly be seen in Fig. 17. As the ends of the hook elements (4) are elastically deformable however, this first detaining element (5) can only detain the wire panel (3) when small forces are applied when it is being lifted out of engagement. However, on the other hand, the bent-over part of a vertical wire (3b) which forms part of the nose (12) hits the lip (10) in the form of a second detaining element (10) when the fence panel (3) is being lifted out of engagement. This lip (10) is a rigid detaining element (10) which therefore also detains the wire panel (3) when relatively large forces are being used during its removal.

[0034] An embodiment of a fence (1) according to the present invention which is not illustrated comprises only said lips (10) as detaining elements and no click elements (5).

[0035] The illustrated fence posts (2) are made from sheet metal by folding and can be produced in a simple manner. After folding, they can furthermore be provided with a protective coating. Due to the design of the fence posts (2) in which the second parts (9b) of the flanges (9a, 9b) are turned towards the reinforcing pillar (7), all parts of these fence posts (2) are readily accessible so as to be able to apply this coating.

[0036] However, according to the same attachment principle for attaching the fence panels (3), these fence posts (2) could equally well be made out of other materials and/or be produced using other production methods. Such a fence post (2) according to the invention could, for example, also comprise a beam-shaped or round post to which upright hook elements (4) are attached and which is furthermore, for example, provided with click elements (5) acting as detaining elements for click-fitting a horizontal wire (3a) to such a hook element (4).

[0037] The illustrated wire panels (3) are three-dimensional wire panels (3) which are provided with noses (12) which are formed by horizontal wires (3a) extending beyond the plane in which most wires (3a, 3b) of the wire panel (3) essentially extend. The reinforcing pillar (7), the web plate (8) and the first part (9a) of the flange (9a, 9b), to which this wire panel (3) is attached, delimit a space in which the end of the wire panel (3) can be fitted across its full width. The end of each nose (12) can thus also be

fitted in this space. The passage between the reinforcing pillar (7) and the second part (9b) of the flange (9a, 9b) has a width which corresponds to the width of the wire panel (3) and, more specifically, to the width of these noses (12), so that the end of this wire panel (3) can be fitted through this passage.

[0038] In order to attach such a wire panel (3) to a fence post (2), this wire panel (3) is first positioned next to this fence post (2), as is illustrated in Figs. 9 and 10. Thereafter, the end of the fence panel (2), viewed in the plane view from Fig. 10, is pushed to the left, between said passage between the reinforcing pillar (7) and the second part (9b) of the flange (9a, 9b), until this wire panel (3) is situated virtually against the web plate (8), as is illustrated in Figs. 11 and 12. In this case, the horizontal wires (3a) of the fence panel (3) which adjoin the second part (9b) of the flange (9a, 9b) are positioned at the location of the entrances of the slots (6) in this second part (9b), as can clearly be seen in Fig. 11. In a subsequent step, the wire panel (3) is moved to the first part (9a) of the flange (9a, 9b) until this wire panel (3) comes to lie virtually against this first part (9a). The horizontal wires (3a) which were positioned in front of the entrances of the slots (6) are in this case fitted in these slots (6). Using the force of gravity, this wire panel (3) is then pulled downwards, in which case said horizontal wires (3a) are pulled through the constrictions in the respective slots (6), as can clearly be seen in Figs. 15 and 16. In a last step, the wire panel (3), viewed in the plan view of Fig. 16, is again moved to the right-hand side, until the vertical wire (3b) which is situated in the cavity between the flange (9a, 9b) and the web plate (8) is pulled up against the second part (9b) of the flange (9a, 9b), as can clearly be seen in Fig. 18. By pulling said vertical wire (3b) against the second part (9b) of the flange (9a, 9b), it is possible to secure a wire panel (3) which is fitted between two fence posts (2) between these fence panels (2), as a result of which detachment of these fence panels (3) is made even more difficult. By pulling this vertical wire (3b) against the second part (9b) of the flange (9a, 9b) using a lip (10) as detaining element (10), the respective bent-over part of this vertical wire (3b) is fitted behind this lip (10), as a result of which it can serve as a detaining element (10).

Claims

1. Fence (1) comprising

- a. at least one fence panel (3) which is in the form of a wire panel comprising horizontal wires (3a) which, in the installed position of the fence (1), extend substantially horizontally and vertical wires (3b) which, in the installed position of the fence (1), extend substantially vertically;
- b. and at least one fence post (2) which comprises at least one upright hook element (4) over which at least one horizontal wire (3a) can be

hooked in order to hold said horizontal wire (3a) for attaching the fence panel (3) to the fence post (2);

characterized in that

the fence post (2) comprises at least one detaining element (5, 10) which is integrally formed with the fence post (2) in the form of a click element (5) in order to click-fit a horizontal wire (3a) onto the hook element (4) when the former is hooked into the hook element (4), for detaining the wire panel (3) when an attempt is made to lift the wire panel (3) from the installed position of the fence (1) out of engagement with the hook element (4).

2. Fence (1) according to claim 1, **characterized in that** the fence post (2) comprises at least one flange (9a, 9b) and **in that** the hook element (4) forms part of this flange (9a, 9b) and is formed by a slot (6) which is provided at the end of this flange (9a, 9b).
3. Fence (1) according to Claim 1 and 2, **characterized in that** the click element (5) is formed by partly punching out and folding a part of the flange (9a, 9b) at the location of the hook element (4).
4. Fence (1) according to Claim 1 and 2, **characterized in that** the click element (5) is formed by folding a part of the flange (9a, 9b) at the location of the hook element (4).
5. Fence (1) according to Claim 1 and 2, **characterized in that** the click element (5) forms part of the flange (9a, 9b) and is formed by providing a local constriction in the slot (6).
6. Fence (1) according to one of Claims 2 to 5, **characterized in that** the fence post (2) comprises a reinforcing pillar (7) and a web plate (8) connected thereto, with the flange (9a, 9b) being provided at the end of the web plate (8).
7. Fence (1) according to Claim 6, **characterized in that** the flange (9a, 9b) is a folded-over flange (9a, 9b), comprising a first part (9a) which extends virtually at right angles to the web plate (8) and a second part (9b) which is directed substantially towards the reinforcing pillar (7).
8. Fence (1) according to Claim 7, **characterized in that** the slot (6) in the flange (9a, 9b) is provided in the second part (9b) of the flange (9a, 9b).
9. Fence (1) according to Claim 3 or 4 and Claim 8, **characterized in that** the click element (5) is provided in the first part (9a) of the flange (9a, 9b).
10. Fence (1) according to one of Claims 2 to 9, **char-**

acterized in that the fence post (2) comprises two flanges (9a, 9b), each of which is provided with slots (6) in order to form hook elements (4) so as to hook horizontal wires (3a) of fence panels (3) thereon.

11. Fence (1) according to Claim 10, **characterized in that** the fence post (2) is of virtually symmetrical design.

Patentansprüche

1. Zaun (1), umfassend

a. zumindest eine erste Zauntable (3), die in der Form einer Drahttable ist, welche horizontale Drähte (3a), die in der eingerichteten Position des Zauns (1) im Wesentlichen horizontal verlaufen, und vertikale Drähte (3b) umfasst, die in der eingerichteten Position des Zauns (1) im Wesentlichen vertikal verlaufen,

b. und zumindest einen Zaunpfahl (2), der zumindest ein aufrechtes Hakenelement (4) umfasst, über das zumindest ein horizontaler Draht (3a) gehakt sein kann, um den horizontalen Draht (3a) zum Anbringen der Zauntable (3) am Zaunpfahl (2) zu halten;

dadurch gekennzeichnet, dass

der Zaunpfahl (2) zumindest ein Rückhalteelement (5, 10) umfasst, das einstückig mit dem Zaunpfahl (2) in Form eines Klickelements (5) zum Aufklicken eines horizontalen Drahts (3a) auf das Hakenelement (4), wenn das erstere in das Hakenelement (4) eingehakt ist, ausgebildet ist, um die Drahttable (3) zurückzuhalten, wenn ein Versuch unternommen wird, die Drahttable (3) aus der eingerichteten Position des Zauns (1) außer Eingriff mit dem Hakenelement (4) zu heben.

2. Zaun (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Zaunpfahl (2) zumindest einen Flansch (9a, 9b) umfasst, und dass das Hakenelement (4) einen Teil dieses Flanschs (9a, 9b) ausbildet und durch einen Schlitz (6) ausgebildet ist, der am Ende dieses Flanschs (9a, 9b) vorgesehen ist.

3. Zaun (1) nach einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** das Klickelement (5) durch teilweises Stanzen und Falzen eines Teils des Flanschs (9a, 9b) am Standort des Hakenelements (4) ausgebildet ist.

4. Zaun (1) nach einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** das Klickelement (5) durch Falzen eines Teils des Flanschs (9a, 9b) am Standort des Hakenelements (4) ausgebildet ist.

5. Zaun (1) nach einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** das Klickelement (5) ein Teil des Flanschs (9a, 9b) ausbildet und durch Vorsehen einer örtlichen Verengung im Schlitz (6) ausgebildet ist.

6. Zaun (1) nach einem der Ansprüche 2 bis 5, **dadurch gekennzeichnet, dass** der Zaunpfahl (2) einen Verstärkungspfeiler (7) und eine Stegplatte (8), die damit verbunden ist, umfasst, wobei der Flansch (9a, 9b) am Ende der Stegplatte (8) vorgesehen ist.

7. Zaun (1) nach Anspruch 6, **dadurch gekennzeichnet, dass** der Flansch (9a, 9b) ein übergefalteter Flansch (9a, 9b) ist, umfassend ein erstes Teil (9a), das im Grunde rechtwinklig zur Stegplatte (8) verläuft, und ein zweites Teil (9b), das im Wesentlichen zum Verstärkungspfeiler (7) hin gerichtet ist.

8. Zaun (1) nach Anspruch 7, **dadurch gekennzeichnet, dass** der Schlitz (6) im Flansch (9a, 9b) im zweiten Teil (9b) des Flanschs (9a, 9b) vorgesehen ist.

9. Zaun (1) nach einem der Ansprüche 3 oder 4 und Anspruch 8, **dadurch gekennzeichnet, dass** das Klickelement (5) im ersten Teil (9a) des Flanschs (9a, 9b) vorgesehen ist.

10. Zaun (1) nach einem der Ansprüche 2 bis 9, **dadurch gekennzeichnet, dass** der Zaunpfahl (2) zwei Flansche (9a, 9b) umfasst, der jeder mit Schlitz (6) versehen ist, um Hakenelemente (4) zum Anhängen von horizontalen Drähten (3a) von Zauntable (3) daran auszubilden.

11. Zaun (1) nach Anspruch 10, **dadurch gekennzeichnet, dass** der Zaunpfahl (2) eine im Grunde symmetrische Gestaltung aufweist.

Revendications

1. Clôture (1) comprenant :

a. au moins un panneau de clôture (3) qui se présente sous la forme d'un panneau de treillis comprenant des fils métalliques horizontaux (3a), qui, en position installée de la clôture (1), s'étendent sensiblement horizontalement, et des fils verticaux (3b) qui, en position installée de la clôture (1), s'étendent sensiblement verticalement ; et

b. au moins un poteau de clôture (2) qui comprend au moins un élément d'accrochage vertical (4) sur lequel au moins un fil métallique horizontal (3a) peut être accroché afin de maintenir ledit fil métallique horizontal (3a) pour fixer le panneau de clôture (3) au poteau de clôture (2) ;

caractérisée en ce que :

le poteau de clôture (2) comprend au moins un élément de retenue (5, 10) qui est formé intégralement avec le poteau de clôture (2) sous la forme d'un élément à déclic (5) de manière à engager par déclic un fil métallique horizontal (3a) sur l'élément d'accrochage (4) lorsque le premier est accroché dans l'élément d'accrochage (4) afin de retenir le panneau de treillis (3) lorsqu'une tentative est faite pour soulever le panneau de treillis (3) depuis la position installée de la clôture (1) hors d'engagement avec l'élément d'accrochage (4).

2. Clôture (1) selon la revendication 1, **caractérisée en ce que** le poteau de clôture (2) comprend au moins une aile (9a, 9b) et **en ce que** l'élément d'accrochage (4) fait partie de cette aile (9a, 9b) et est formé par une fente (6) qui est ménagée à l'extrémité de cette aile (9a, 9b). 20
3. Clôture (1) selon les revendications 1 et 2, **caractérisée en ce que** l'élément à cliquet (5) est formé en poinçonnant en partie et en repliant une partie de l'aile (9a, 9b) à l'emplacement de l'élément d'accrochage (4). 25
4. Clôture (1) selon les revendications 1 et 2, **caractérisée en ce que** l'élément à cliquet (5) est formé en repliant une partie de l'aile (9a, 9b) à l'emplacement de l'élément d'accrochage (4). 30
5. Clôture (1) selon les revendications 1 et 2, **caractérisée en ce que** l'élément à cliquet (5) fait partie de l'aile (9a, 9b) et est formé en ménageant un resserrement local dans la fente (6). 35
6. Clôture (1) selon l'une quelconque des revendications 2 à 5, **caractérisée en ce que** le poteau de clôture (2) comprend un pilier de renfort (7) et une plaque formant âme (8) qui lui est raccordée, l'aile (9a, 9b) étant appliquée à l'extrémité de la plaque formant âme (8). 40
45
7. Clôture (1) selon la revendication 6, **caractérisée en ce que** l'aile (9a, 9b) est une aile rabattue (9a, 9b) comprenant une première partie (9a) qui s'étend virtuellement à angle droit avec la plaque formant âme (8) et une seconde partie (9b) qui est dirigée sensiblement vers le pilier de renfort (7). 50
8. Clôture (1) selon la revendication 7, **caractérisée en ce que** la fente (6) dans l'aile (9a, 9b) est ménagée dans la seconde partie (9b) de l'aile (9a, 9b). 55
9. Clôture (1) selon la revendication 3 ou 4 et la reven-

dication 8, **caractérisée en ce que** l'élément à déclic (5) est situé dans la première partie (9a) de l'aile (9a, 9b).

- 5 10. Clôture (1) selon l'une quelconque des revendications 2 à 9, **caractérisée en ce que** le poteau de clôture (2) comprend deux ailes (9a, 9b) dont chacune est pourvue de fentes (6) afin de former des éléments d'accrochage (4) de manière à y accrocher des fils métalliques horizontaux (3a) de panneaux de clôture (3). 10
11. Clôture (1) selon la revendication 10, **caractérisée en ce que** le poteau de clôture (2) présente un modèle virtuellement symétrique. 15

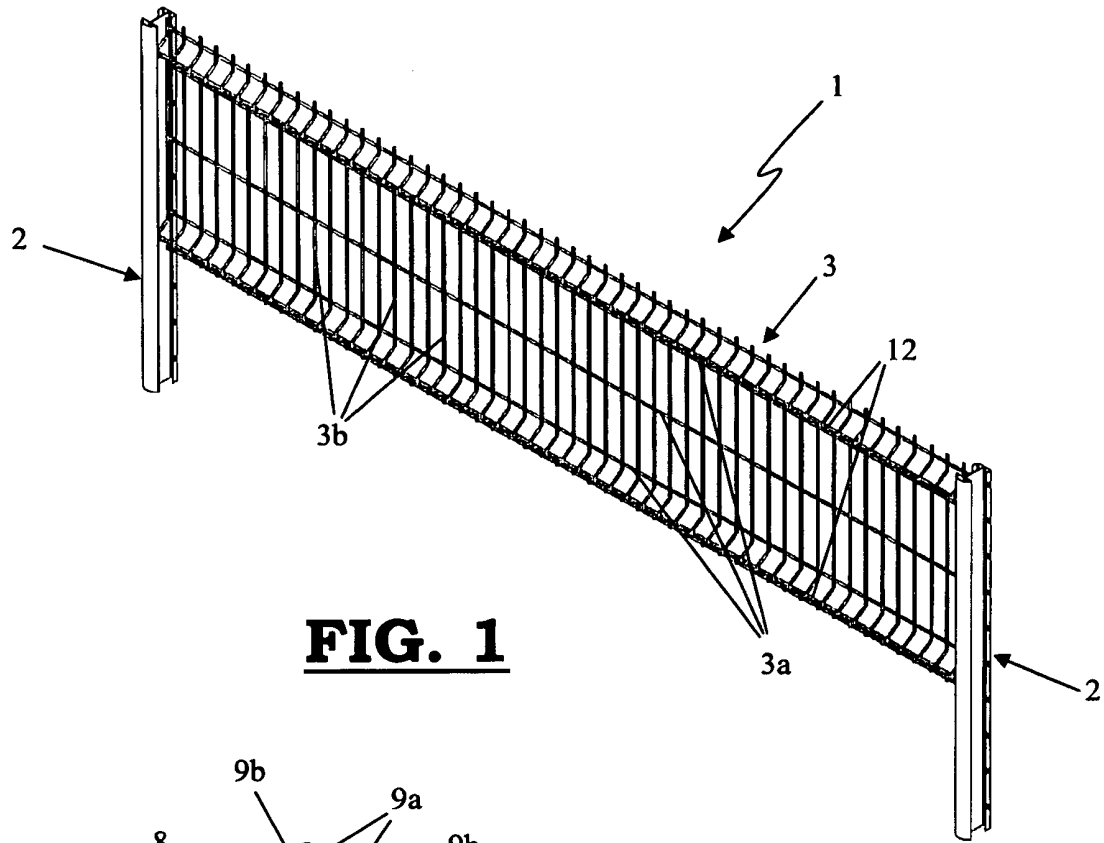


FIG. 1

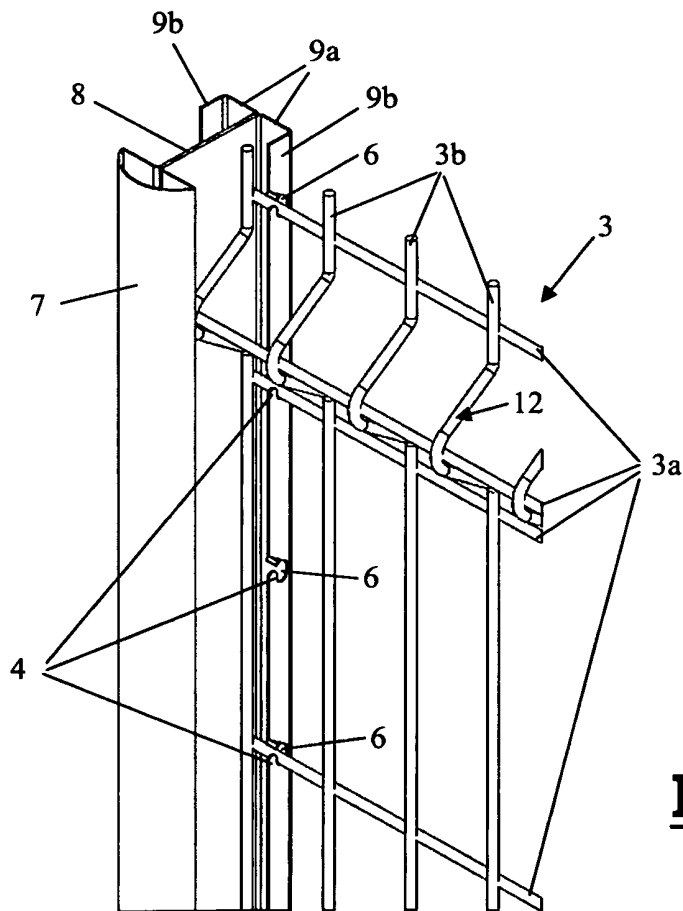
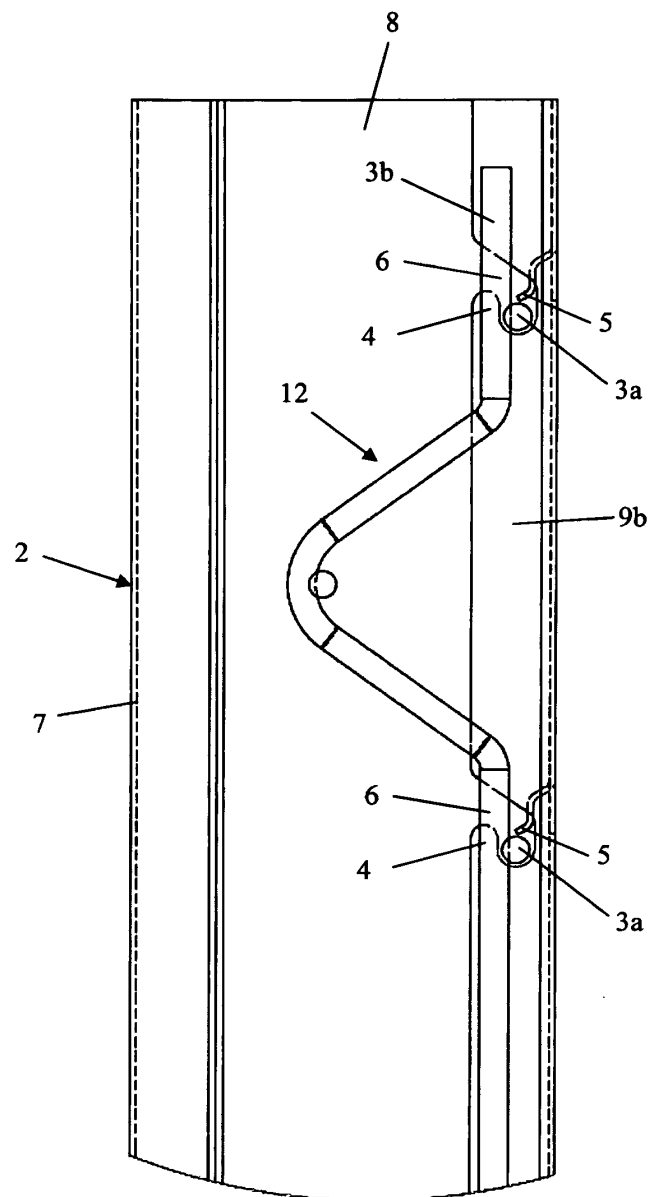
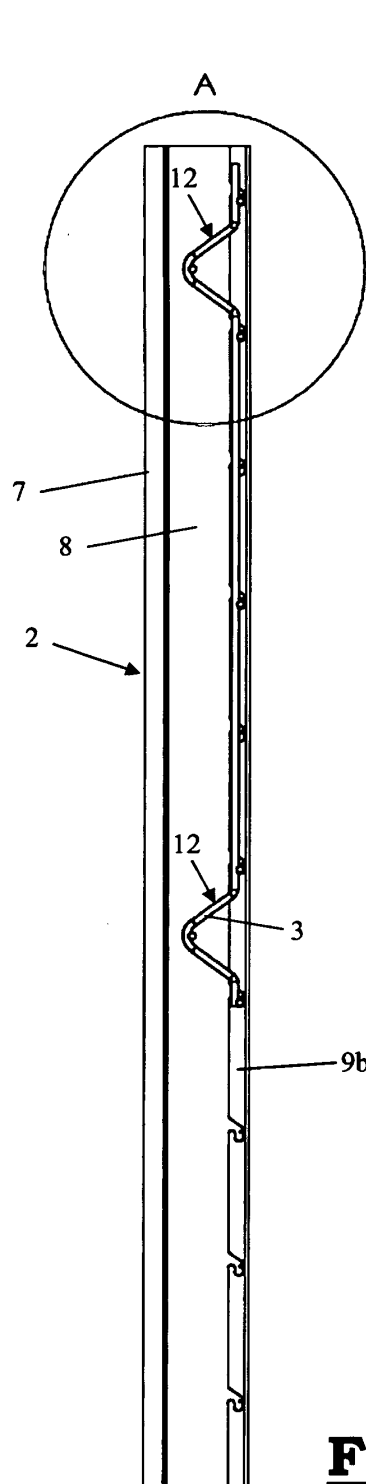


FIG. 2



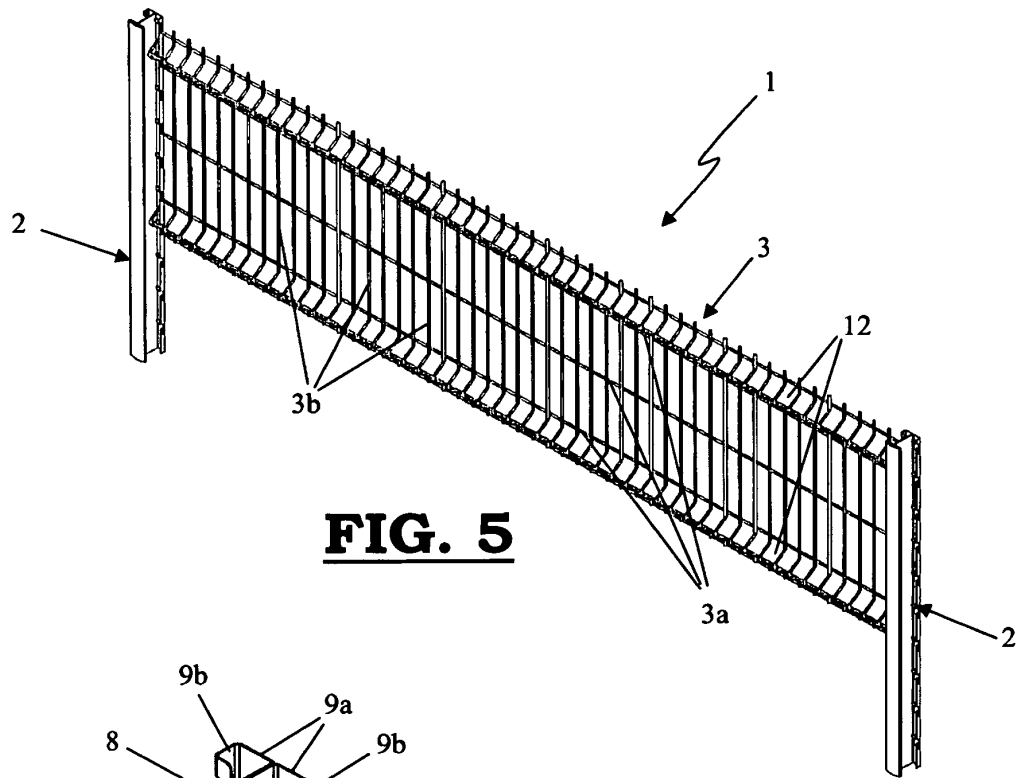


FIG. 5

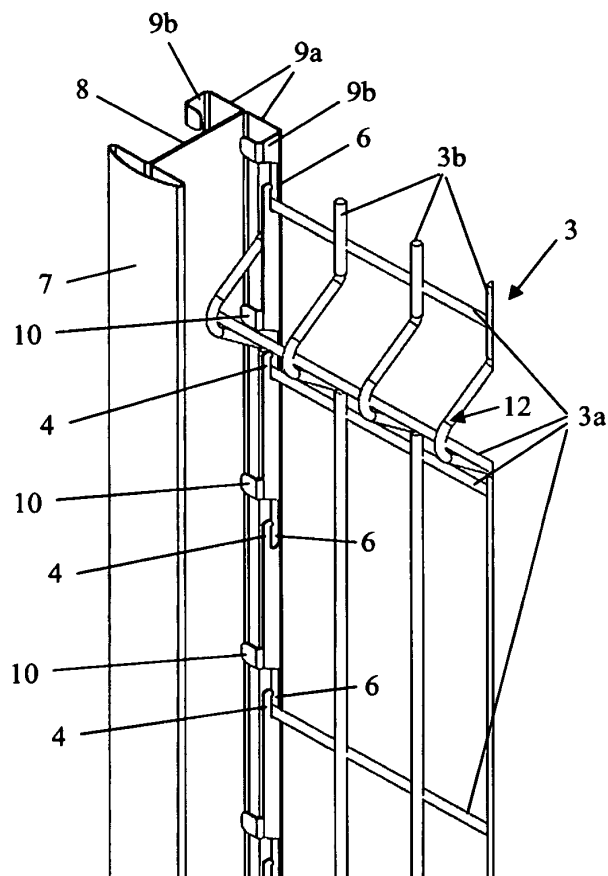


FIG. 6

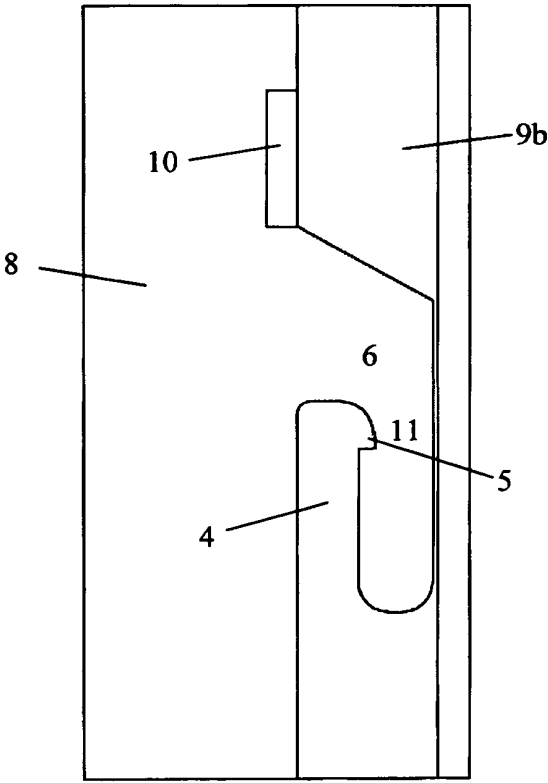
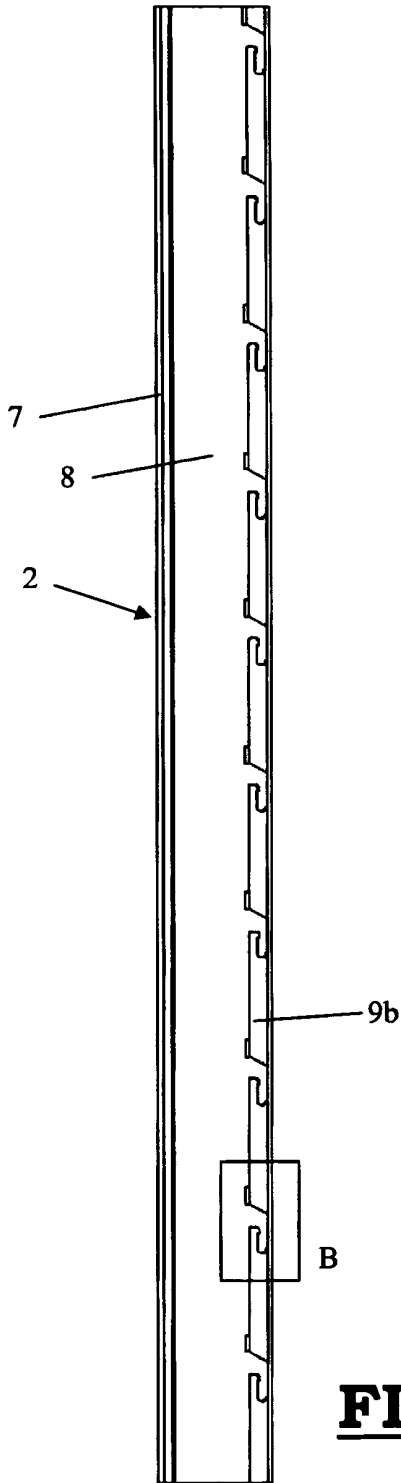


FIG. 8

FIG. 7

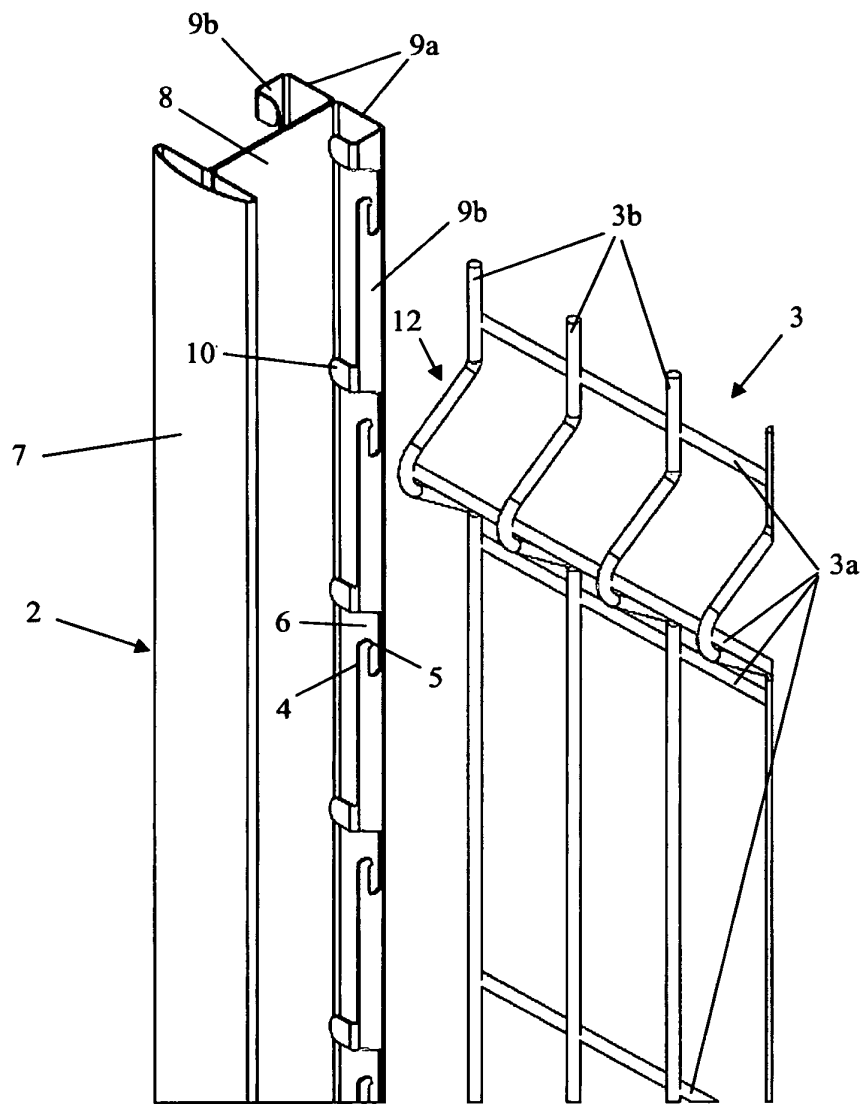


FIG. 9

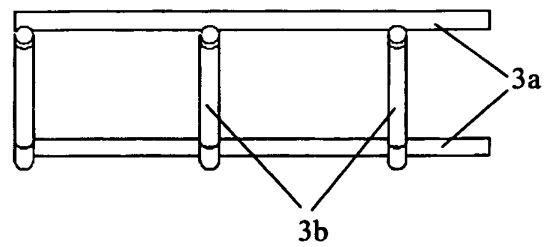
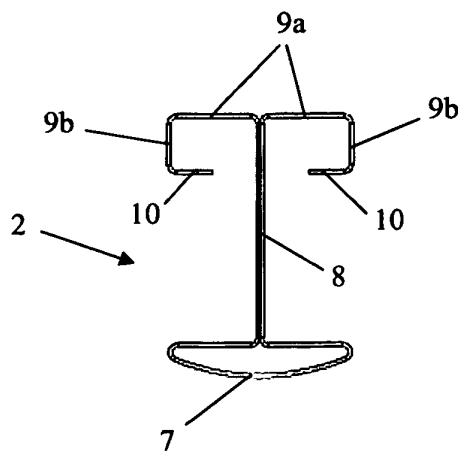


FIG. 10

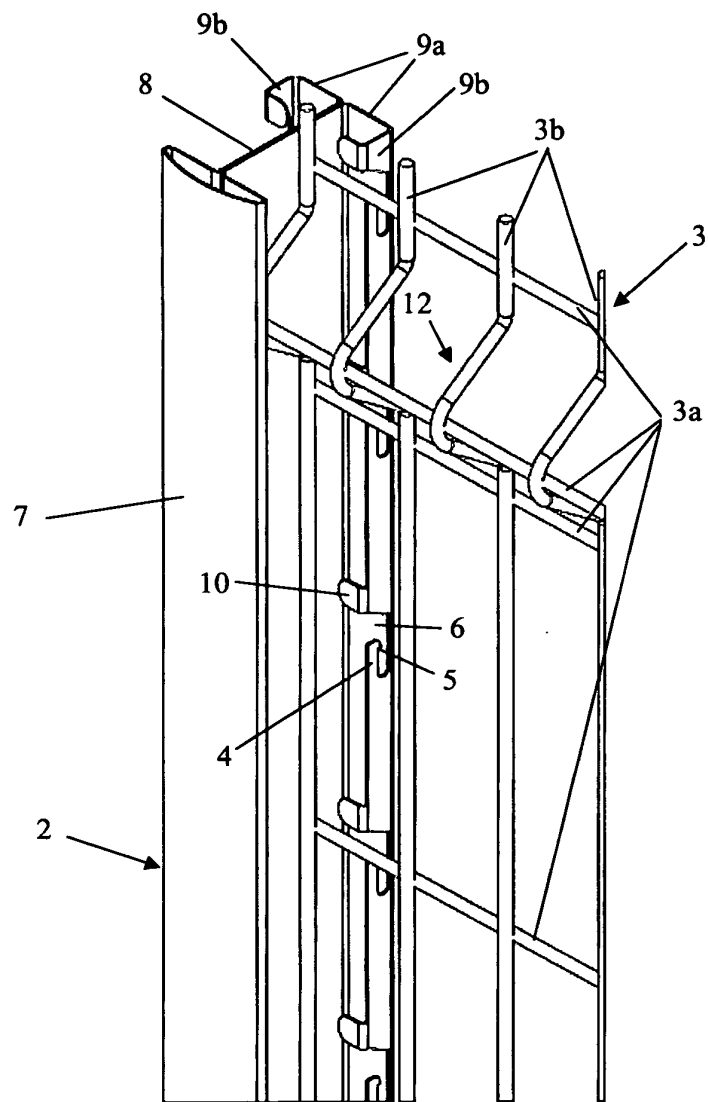


FIG. 11

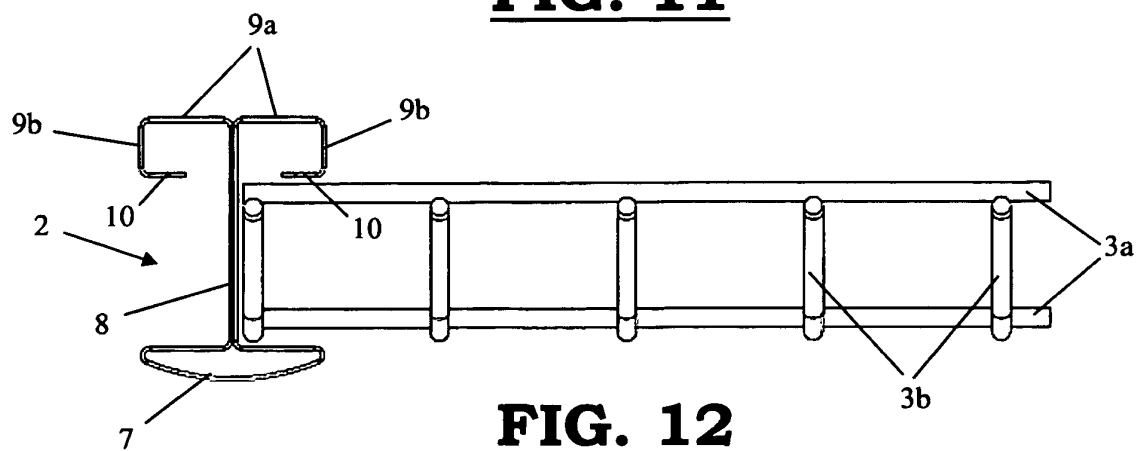


FIG. 12

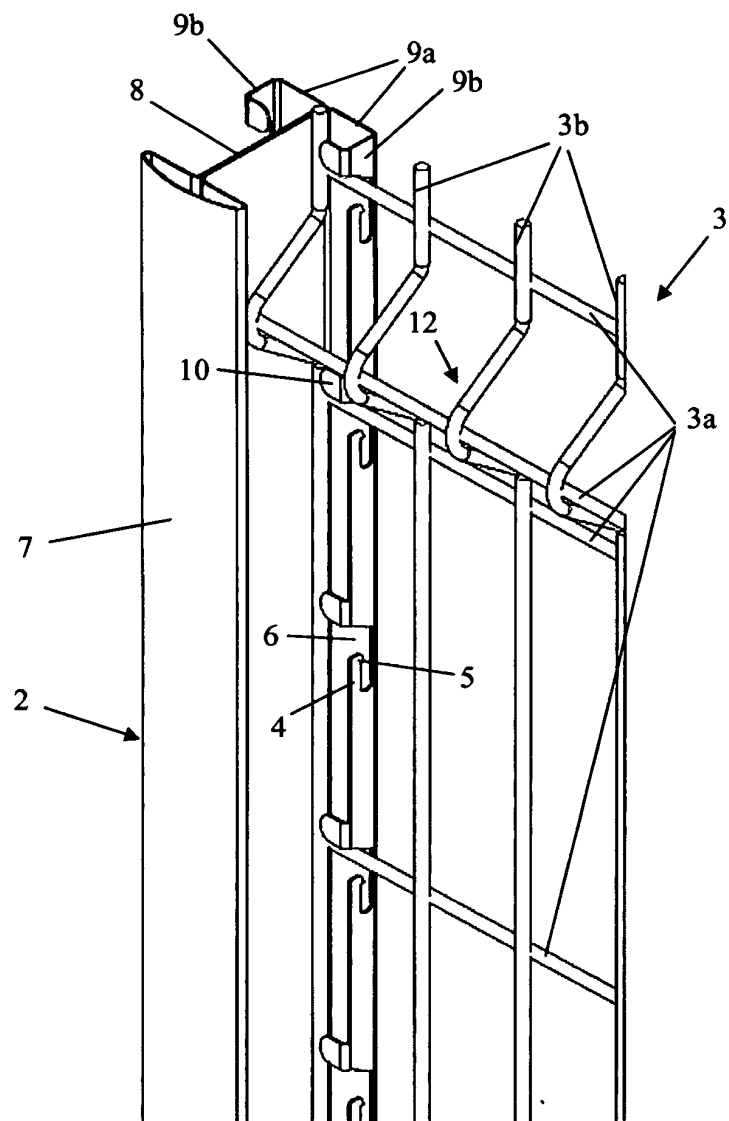


FIG. 13

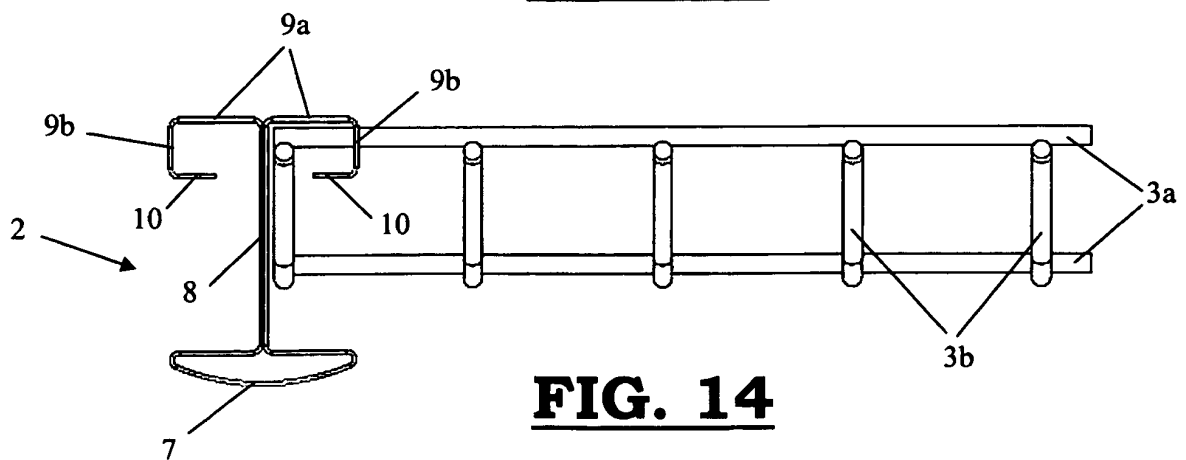


FIG. 14

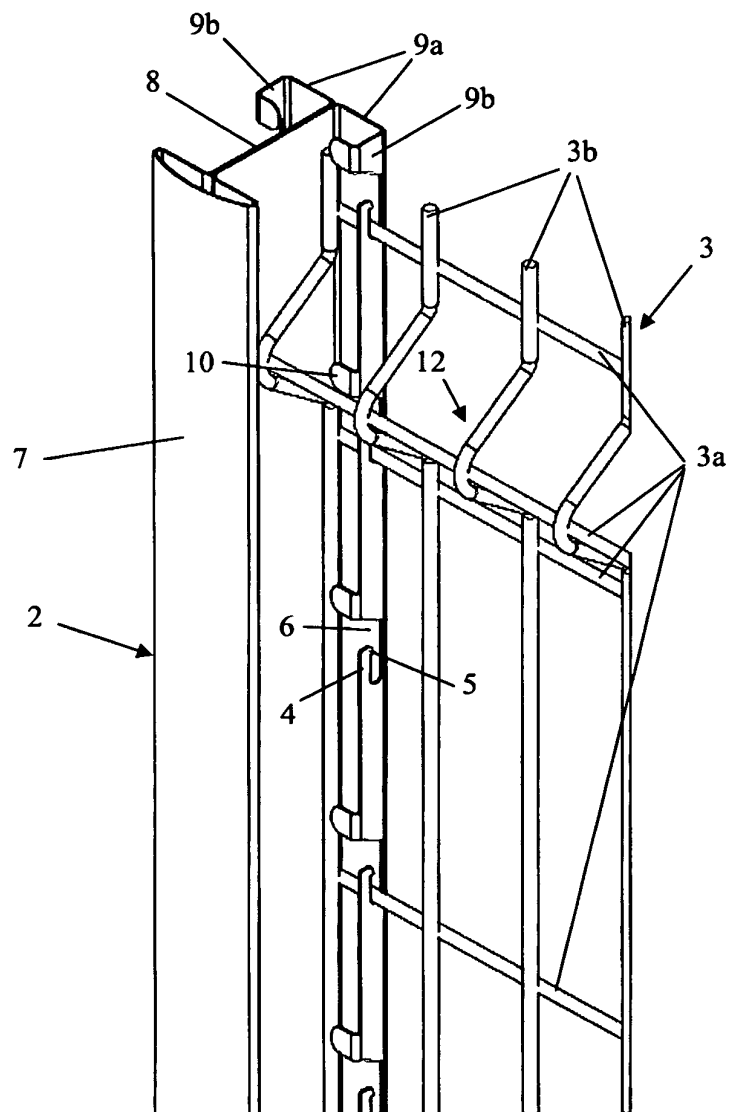


FIG. 15

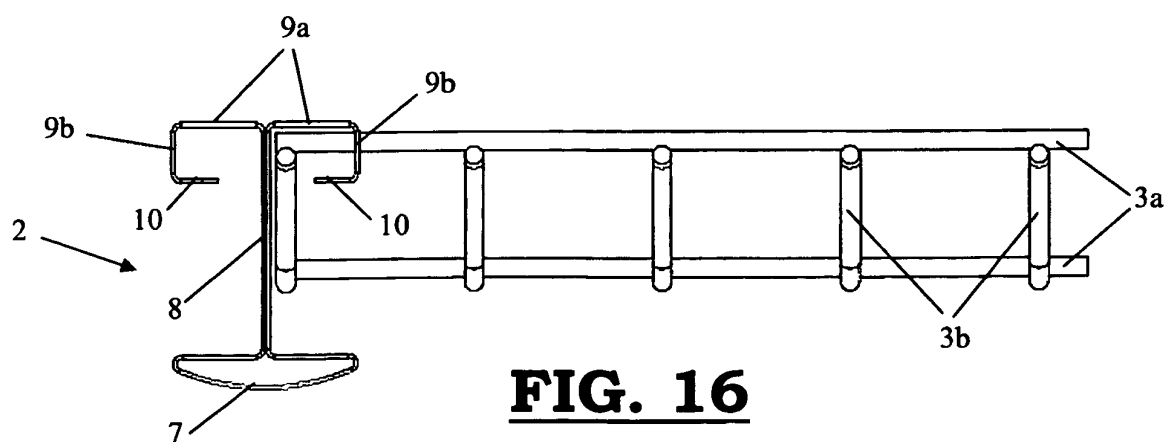


FIG. 16

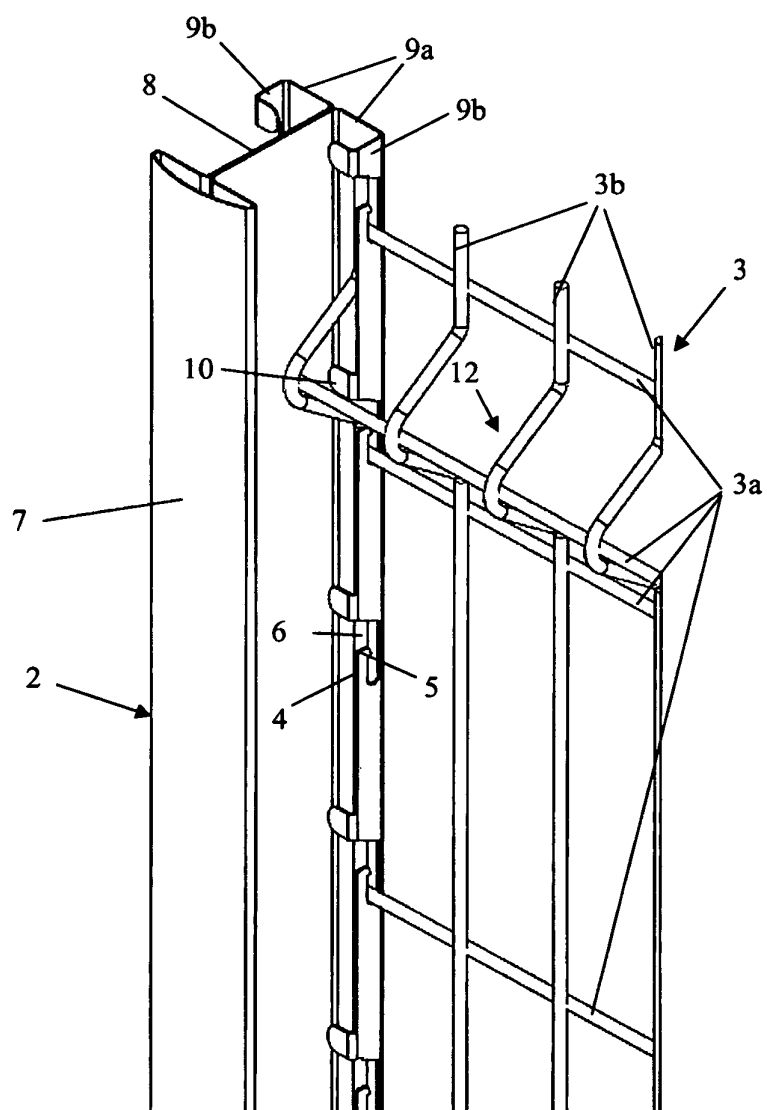


FIG. 17

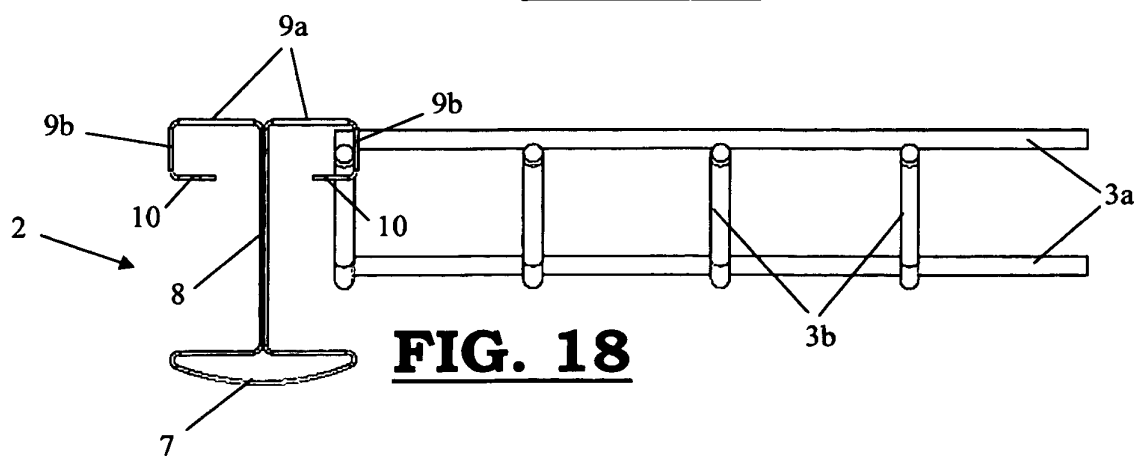


FIG. 18

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- EP 1306502 A1 [0005]
- FR 2923248 A1 [0006]
- EP 2055866 A1 [0006]
- FR 2890407 A3 [0006]
- BE 1017701 A3 [0006]
- EP 2055866 A [0006]