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(54) **Fence for use as barrier installation**

Zaun zur Verwendung als Absperrzaun

Clôture destinée à être utilisée comme barrière

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Description

[0001] This invention relates to a fence comprising at least two hollow fence panels, between which at least two crossbeams extend, wherein each crossbeam fits into an opening provided in the fence post, and a blocking element extending into the cavity of the fence post which is provided to block the crossbeams against displacement. This invention relates more particularly to a fence which has been designed specifically with the aim of offering an appropriate and economical solution as a barrier installation and/or screen and/or fall protection for a wide range of applications, both industrial and civil.

[0002] In practice, a fence in the form of posts or barriers is set up temporarily or permanently in many companies at various locations with the aim of preventing machinery, objects and the like from being damaged by vehicles or means of transport during manoeuvring. A fence of this type can also be used as a screen to protect persons, for example to prevent them from falling downwards.

[0003] A multiplicity of fences (fence systems) have already been developed, wherein rigid crossbeams are connected via a welded connection to a number of vertically disposed posts. However, a construction of this type has the disadvantage that the positioning thereof requires a lot of time and, furthermore, it is subsequently difficult to move and repair.

[0004] In order to solve the aforementioned problem relating to the welded fences and furthermore enable more configuration options, the European patent publication EP 1 483 160 describes a fence with interlockable components, comprising a number of upright posts, between which a crossbeam made from a tubular plastic material extends, and which fits into a first opening provided in an upright post. The end of the crossbeam is provided with a second opening which lies within the hollow inner area of the vertical post. In order to block the crossbeam, the fence described in EP 1 483 160 comprises a blocking element similarly made from a tubular plastic material.

[0005] In order to now block the crossbeam, the tubular blocking element is forced into the aforementioned second opening, which is too small in relation to the tubular blocking element. Given that the second opening is too small for the tubular blocking element, the material of the blocking element will be slightly compressed during the positioning thereof, at the second opening. This compression will become permanent through time, as a result of which, as it were, a slight protuberance is formed on each side of the second opening, and as a result of which the tubular blocking element is, as it were, held mechanically in position. However, this has the disadvantage that the construction is subsequently difficult to dismantle. Furthermore, the tubular blocking element forms an obstacle to any present wiring which extends through the different crossbeams.

[0006] The American patent publication US 3,921,960

describes a fence comprising all of the features of the preamble of claim 1. That is to say said fence comprises at least two hollow fence posts, between which at least two crossbeams extend. In a specific embodiment, the fence comprises a plate-shaped blocking element which is provided to block the crossbeams against displacement, and which is movable between a first position in which the crossbeams are movable into and out of the fence post and a second position in which the crossbeams are blocked in place. However, the fence described in US 3,921,960 has the disadvantage that, on impact (for example due to a collision), the risk exists that only the blocking element will break, and, for example, only at one or more blocking positions (at the opening(s) in the blocking element). As the blocking element is located in the inner area of the fence post, the damage is not visible, so that the risk exists that the broken blocking element will not be replaced, as a result of which the crossbeam sits, as it were, loosely in the fence post. The crossbeam thereby loses its function and, on a following impact, will immediately come loose from the fence post, with all associated risks.

[0007] The object of this invention is now to provide a reliable fence which retains its specific function, even following an impact. An additional object is to provide a fence which can be simply and quickly assembled in situ, and which furthermore can subsequently be simply dismantled.

[0008] The object of the invention is achieved by providing a fence comprising at least two hollow fence posts, between which at least two crossbeams extend, wherein each crossbeam fits into an opening provided in the fence post, a plate-shaped blocking element extending into the cavity of the fence post which is provided to block the crossbeams against displacement, wherein the crossbeams are provided in their external circumference with at least one recess which lies within the hollow inner area of the fence post and wherein the plate-shaped blocking element is movable between a first position in which the crossbeams are movable into and out of the fence post and a second position in which the crossbeams are blocked in place, wherein the aforementioned blocking element comprises at least two openings positioned at a distance from one another, which are each provided to block a crossbeam against displacement, and wherein the aforementioned blocking element is provided between the aforementioned openings with one or more break lines, along which the blocking element is breakable into different separate blocking elements. In the event of any impact, the presence of break lines of this type will ensure that the blocking element will break at the disposed break lines into separate blocking elements, which will each still perform their function, i.e. the blocking of the relevant crossbeam. In this way, breaking of the blocking element at other places, for example at the blocking position, is avoided. Consequently, the presence of break lines of this type will provide a more reliable fence. Furthermore, a fence of this type is very quick to

install and can subsequently be easily dismantled, since the blocking element, which ensures the interlocking between the fence post and the crossbeam, is easily movable between the first and second position. Given that the recesses are located on the outer circumference of the crossbeam, this fence has the advantage that the blocking element no longer forms an obstacle to any cabling or other elements (for example strengthening rods) which extend through the different crossbeams.

[0009] In the context of this invention, the aforementioned break lines must be regarded as a zone (a so-called break zone), which extends over virtually the entire width of the blocking element and is more breakable than the remainder of the blocking element. This can be achieved, for example, by designing the blocking element at the break zone as thinner than the remainder of the blocking element, or, for example, by making the break zone from a suitable material which breaks more easily than the material from which the remainder of the blocking element is made. It is evident that other solutions for providing a weaker zone in the blocking element similarly fall within the scope of protection of this invention.

[0010] In a preferred embodiment of the fence according to the invention, the crossbeam comprises two recesses located opposite one another which extend across the longitudinal direction of the crossbeam. Both recesses are preferably symmetrically structured.

[0011] In a more preferred embodiment of the fence according to the invention, the fence posts are made from tubular plastic material, extending essentially vertically in the assembled condition of the fence, and the crossbeams are made from tubular plastic material, extending essentially horizontally in the assembled condition of the fence. These can be manufactured, for example, via injection moulding and/or extrusion. According to a particular embodiment of the fence according to this invention, the openings provided in the blocking element have a width on their one side which is greater than the width of the crossbeam to be blocked and, on their opposite side, a width which is smaller than the width of the crossbeam to be blocked. More specifically, the opening is constructed from:

- a first part with a width which is greater than the width of the crossbeam to be blocked;
- a second part with a width which is smaller than the width of the crossbeam to be blocked;
- a third part which forms the transition between the first and second part and of which the width gradually decreases in the direction of the second part.

[0012] The specific shape, more specifically key-shaped, of the opening disposed in the blocking element allows the crossbeam to be moved into and out of the fence post in a first position of the blocking element, and to be blocked in a second position.

[0013] If the fence comprises a plurality of crossbeams positioned above one another, the latter can be blocked

with the same blocking element. For this purpose, the blocking element, in a more particular embodiment of the fence, is provided with a first, second and third opening which are provided to block the first, second and third crossbeam respectively, wherein one or more break lines are provided between the first and second opening, and between the second and third opening. It is self-evident that, in the case of a fourth or possibly fifth crossbeam, the blocking element can further be provided with a fourth and fifth opening of a similar type.

[0014] According to an advantageous embodiment of the fence according to the invention, the blocking element comprises, in its outer circumference, at least one recess which is dimensioned in such a way that it is suitable to serve as a grip during the movement of the blocking element between the first and second position. The blocking element preferably comprises two recesses located opposite one another which are dimensioned in such a way that they are suitable to serve as a grip during the movement of the blocking element between the first and second position. Recesses of this type give the user of the fence the facility to grip the blocking element easily and firmly with the fingers of the hand in order to move it between the first and second position, or to insert it easily into the vertically disposed fence post and to push it over the one or more crossbeams or to easily remove the blocking element.

[0015] In a preferred embodiment of the fence according to the invention, the blocking element is made from plastic. As a result, the required shape thereof can be simply implemented, for example, via injection moulding.

[0016] In a particular embodiment of the fence according to the invention, the fence post comprises at least one essentially flat rear side and front side and at least two essentially flat side surfaces, and, following attachment of the crossbeam to the fence post, the blocking element lies against one of the flat side surfaces. In this embodiment, the blocking element in the assembled condition will exert a tension both sideways and from above on the inserted crossbeam i.e. if a horizontal or vertical force is exerted on the fence, the crossbeam is always clamped in place with two sides. In specific cases, even three sides will offer resistance. In the event of impact on the fence, the end of the crossbeam will bend through, so that the side edges of the fence post (with a vertical cross-section) will also exert resistance on the flat blocking element and will thereby bear (absorb) a part of the force.

[0017] In an alternative embodiment of the fence according to the invention, the fence post has a round cross-section and, following attachment of the crossbeam to the fence post, the blocking element lies against a curved side wall. In this embodiment, the flat blocking plate will, as it were, be forced during the assembly to assume the shape of the fence post and as a result will be slightly curved. As a result, an additional tension will be created which will ensure that the fence becomes stronger.

[0018] According to a more particular embodiment of the fence according to the invention, the fence post comprises a base plate in order to attach it to an underlying structure.

[0019] This invention is now explained in detail with reference to the following detailed description of a preferred embodiment of a fence according to this invention. The purpose of this description is exclusively to provide illustrative examples and to indicate further advantages and special features of this fence, and cannot therefore be interpreted as a limitation of the scope of application of the invention or of the patent rights asserted in the claims.

[0020] In this detailed description, reference figures are used to refer to the attached drawings, in which:

- **Figure 1** is a representation of a fence according to this invention;
- **Figure 2** is a detailed representation of the area B encircled in Figure 1, on which a side view of an end of the crossbeam is shown;
- **Figure 3** is a detailed representation of the area B encircled in Figure 1, on which a top view of an end of the crossbeam is shown;
- **Figure 4** is a detailed representation of the area A encircled in Figure 1, on which a side view of a part of the blocking element is shown;
- **Figure 5** is a front view of a fence according to the invention;
- **Figure 6** is a detailed representation of the area A encircled in Figure 5;
- **Figure 7** is a front view of a blocking element provided with break lines between the different openings;
- **Figure 8** indicates step-by-step how the fence is assembled;
- **Figure 9** shows how an angle can be formed in the fence.

[0021] A fence (1) according to this invention, as shown, inter alia, in Figures 1 and 5, comprises two or more fence posts (2), between which at least two crossbeams (3) extend. In the figures shown, three crossbeams (3a;3b;3c) are provided in each case between vertically standing fence posts (2). The fence (1) according to this invention can be designed as a straight line, but it is also possible to design it as angular (see, for example Fig. 9).

[0022] The fence posts (2), which are shown in Figures 1, 5 and 8, are hollow posts with a simple basic form, so that they can be simply produced. They comprise an essentially flat rear side, two essentially flat side areas and a flat front side. However, the fence posts may also have a round cross-section. The fence posts (2) may, for example, be made from an aluminium alloy, or from steel, or from plastic, etc., and may, for example, be manufactured via folding, or via welding, via injection moulding, or via extrusion, etc. These fence posts (2) are preferably

manufactured from a tubular plastic material, and, in the assembled condition of the fence (1), will extend essentially vertically. The crossbeams (3) are also preferably made from tubular plastic material, and, in the assembled condition of the fence (2), will essentially extend horizontally.

[0023] According to the invention, the fence (1) comprises at least two hollow fence posts (2), between which at least two crossbeams (3) extend, wherein each crossbeam (3) fits into a specific opening (4) provided in the fence post (2). The crossbeam (3) will extend partially into the hollow inner area of the fence post (2) after it has been inserted into the opening (4). In principle, the fence post (2) will comprise as many openings (4) as the number of crossbeams which must be assembled between two vertically positioned fence posts. The openings (4) are provided in the two side areas if the fence post (2) is used as an intermediate post (see, for example, Fig. 6), and are provided in one side area if the fence post (2) is used as an end post.

[0024] In order to interlock the crossbeam (3) fitted into the fence post (2) and in this way block it against displacement, a blocking element (5) is provided in the hollow inner area of the fence post (2). As shown, inter alia, in Figure 4, this blocking element (5) is preferably made from a plastic plate in which an opening (8) is provided. The blocking element (5) preferably has a thickness of between 2 and 25 mm.

[0025] The plate-shaped blocking element (5) is movable between a first position in which the crossbeam (3) is movable into and out of the fence post (2) and a second position in which the crossbeam (3) is blocked in place. In order to block the crossbeam (3) by means of the blocking element (5) or allow it to move into and out of the fence post (2), the crossbeam (3), as shown in Figures 2 and 3, comprises at least one recess (6a;6b) which, in the assembled condition, lies within the hollow inner area of the fence post (2), and wherein the blocking element (5) is movable. The crossbeam (3) preferably comprises two recesses (6a and 6b) located opposite one another, which extend across the longitudinal direction of the crossbeam (3). By using a blocking element (5) of this type and because the blocking element (5), following attachment of the crossbeam (3) to the fence post (2), lies against one of the flat side surfaces, an extremely reliable connection of the crossbeam (3) to the fence post (2) is obtained. If the flat blocking element (5) is assembled in fence posts (2) with a round cross-section, an even stronger fence (1) is obtained because, as a result of the deformation of the blocking element (5) during the assembly, an additional tension is created on the crossbeam (3) and the fence post (2).

[0026] Such a way of connecting, wherein the described blocking element is used, furthermore allows the fence to be dismantled in a simple manner, simply by moving the blocking element (5) from the second to the first position.

[0027] As previously mentioned, the blocking element

(5) comprises an opening (8). The specific shape of the opening (8) (see, for example, Figure 4) allows the crossbeam (3) to be moved into and out of the fence post (2) in a first position of the blocking element (5), and to be blocked in a second position. On the one side of the blocking element, which, in the assembled condition, is the underside, the opening (8) has a width which is greater than the width of the crossbeam (3) to be blocked, and, on the opposite side (the upper side of the blocking element), has a width which is smaller than the width of the crossbeam (3) to be blocked. More specifically, the opening is constructed from:

- a first part with a width which is greater than the width of the crossbeam (3) to be blocked;
- a second part with a width which is smaller than the width of the crossbeam (3) to be blocked;
- a third part which forms the transition between the first and second part and of which the width gradually decreases in the direction of the second part.

[0028] If a plurality of crossbeams (3a;3b;3c) are provided between two vertically disposed fence posts (2), they can be blocked with the same blocking element (5). For this purpose, the blocking element (5), as shown in Figure 7, is provided with a number of openings (8) as described above. Three crossbeams (3a,3b,3c) can be blocked with the blocking element (5) shown in Figure 7. This is shown in successive steps in Figures 8.1 to 8.3. Between the different openings (8), the blocking element (5) furthermore comprises so-called break lines (10) or break zones, as a result of which different blocking elements can be formed. The break lines (10) are preferably formed by disposing a weakening in the material from which the blocking element is formed, which can be done, for example, by designing the blocking element at this specific location as thinner than the remainder of the blocking element, or by using a different material which is more breakable than the material from which the remainder of the blocking element is formed.

[0029] The presence of break lines of this type will ensure that, in the event of any impact, the blocking element will break at the disposed break lines into separate blocking elements, which will each still perform their function, i.e. the blocking of the relevant crossbeam. In this way, breaking of the blocking element at other places, for example at the blocking position, is avoided. Because a fence provided with a blocking element of this type which, even following an impact, provides for a continuing blocking of the crossbeams, a fence of this type will be much more reliable than the known fences.

[0030] As shown in Fig. 8.1, during the construction of the fence, the three crossbeams (3a,3b,3c) are inserted into the openings (4) provided in the fence post (2). The blocking element (5) is then inserted into the hollow inner area of the fence post and is pushed over the part of the crossbeam (3) which is located in the hollow inner area of the fence post (2) (see Figure 8.2). At that moment,

the blocking element (5) is located in its first position and the part of the opening (8) with a width which is greater than the width of the crossbeam to be blocked is located at a crossbeam (3a,3b,3c) so that the blocking element can be pushed over the different crossbeams until the blocking element comes into contact with the recesses (6a,6b) disposed in the crossbeams. If the user releases the blocking element (5) at that moment, it will fall downwards under the influence of gravity and be located in its second position (see Fig. 8.3), in which the different crossbeams (3) are blocked in place.

[0031] In order to easily manipulate the blocking element (5), the blocking element (5) preferably comprises two recesses (7) located opposite one another which are dimensioned in such a way that they are suitable to serve as a grip during the movement of the blocking element (5) between the first and second position.

[0032] The fence (1) according to this invention is preferably used as a barrier installation to protect persons, machinery, tools, goods and buildings where lift trucks or other traffic is present. The fence can also be used as a physical screen along a pit or on a gantry in order to thereby prevent persons from falling into the pit or from the gantry. The described fence furthermore requires a minimum of maintenance, has a long service life, can be simply installed, moved and dismantled, and is impact-resistant.

Claims

1. Fence (1) comprising at least two hollow fence posts (2), between which at least two crossbeams (3a;3b;3c) extend, wherein each crossbeam (3a;3b;3c) fits into an opening (4) provided in the fence post (2), a plate-shaped blocking element (5) extending into the cavity of the fence post (2) which is provided to block the crossbeams (3a;3b;3c) against displacement, wherein the crossbeams (3) are provided in their external circumference with at least one recess (6a;6b) which lies within the hollow inner area of the fence post (2) and wherein the plate-shaped blocking element (5) is movable between a first position in which the crossbeams (3a;3b;3c) are movable into and out of the fence post (2) and a second position in which the crossbeams (3a;3b;3c) are blocked in place, wherein the aforementioned blocking element (5) comprises at least two openings (8a;8b;8c) positioned at a distance from one another, which are each provided to block a crossbeam (3a;3b;3c) against displacement, **characterized in that** the aforementioned blocking element (5) is provided between the aforementioned openings (8a;8b;8c) with one or more break lines (10), along which the blocking element (5) is breakable into different separate blocking elements.

2. Fence (1) according to Claim 1, **characterized in**

that the crossbeam (3) comprises two recesses (6a and 6b) located opposite one another, which extend across the longitudinal direction of the crossbeam (3).

3. Fence (1) according to Claim 1 or 2, **characterized in that** the fence posts (2) are made from tubular plastic material, extending essentially vertically in the assembled condition of the fence (1), and that the crossbeams (3) are made from tubular plastic material, extending essentially horizontally in the assembled condition of the fence.
4. Fence (1) according to one of the preceding claims, **characterized in that** the openings (8a;8b;8c) provided in the blocking element (5), on their one side, have a width which is greater than the width of the crossbeam (3a;3b;3c) to be blocked, and, on their opposite side, have a width which is smaller than the width of the crossbeam (3a;3b;3c) to be blocked.
5. Fence (1) according to one of the preceding claims, **characterized in that** the blocking element (5) is provided with a first (8a), second (8b) and third (8c) opening, which are provided to block a first (3a), second (3b) and third (3c) crossbeam respectively, wherein said one or more break lines (10) are provided between the first (8a) and second (8b) opening, and between the second (8b) and third (8c) opening.
6. Fence (1) according to one of the preceding claims, **characterized in that** the blocking element (5) comprises, in its outer circumference, at least one recess (7) which is dimensioned in such a way that it is suitable to serve as a grip during the movement of the blocking element (5) between the first and second position.
7. Fence (1) according to one of the preceding claims, **characterized in that** the blocking element (5) is made from plastic.
8. Fence (1) according to one of the preceding claims, **characterized in that** the fence post (2) comprises at least one essentially flat rear side and front side and at least two essentially flat side surfaces, and that, following attachment of the crossbeam (3) to the fence post (2), the blocking element (5) lies against one of the flat side surfaces.
9. Fence (1) according to one of Claims 1 to 7, **characterized in that** the fence post (2) has a round cross-section and, following attachment of the crossbeam (3) to the fence post (2), the blocking element (5) lies against a curved side wall.
10. Fence (1) according to one of the preceding claims,

characterized in that the fence post (2) comprises a base plate to attach it to the underlying structure.

5 Patentansprüche

1. Zaun (1) mit mindestens zwei hohlen Zaunpfosten (2), zwischen denen sich mindestens zwei Querträger (3a; 3b; 3c) erstrecken, wobei jeder Querträger (3a; 3b; 3c) in eine Öffnung (4) passt, die im Zaunpfosten (2) vorgesehen ist, einem plattenförmigen Blockierelement (5), das sich in den Hohlraum des Zaunpfostens (2) erstreckt, das vorgesehen ist, um die Querträger (3a; 3b; 3c) gegen Verschiebung zu blockieren, wobei die Querträger (3) in ihrem Außenumfang mit mindestens einer Ausnehmung (6a; 6b) versehen sind, die in der hohlen Innenfläche des Zaunpfostens (2) liegt, und wobei sich das plattenförmige Blockierelement (5) zwischen einer ersten Stellung, in der sich die Querträger (3a; 3b; 3c) in den Zaunpfosten (2) und aus diesem heraus bewegen können, und einer zweiten Stellung bewegen kann, in der die Querträger (3a; 3b; 3c) an Ort und Stelle blockiert sind, wobei das vorgenannte Blockierelement (5) mindestens zwei in einem Abstand voneinander angeordnete Öffnungen (8a; 8b; 8c) umfasst, die jeweils vorgesehen sind, um einen Querträger (3a; 3b; 3c) gegen Verschiebung zu blockieren, **dadurch gekennzeichnet, dass** das vorgenannte Blockierelement (5) zwischen den vorgenannten Öffnungen (8a; 8b; 8c) mit einer oder mehreren Bruchlinien (10) versehen ist, entlang der/denen das Blockierelement (5) in verschiedene separate Blockierelemente zerbrochen werden kann.
2. Zaun (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Querträger (3) zwei zueinander entgegengesetzt angeordnete Ausnehmungen (6a und 6b) umfasst, die sich quer zur Längsrichtung des Querträgers (3) erstrecken.
3. Zaun (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Zaunpfosten (2) aus einem rohrförmigen Kunststoffmaterial hergestellt sind und sich im zusammengebauten Zustand des Zauns (1) im Wesentlichen vertikal erstrecken, und dass die Querträger (3) aus einem rohrförmigen Kunststoffmaterial hergestellt sind und sich im zusammengebauten Zustand des Zauns im Wesentlichen horizontal erstrecken.
4. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die im Blockierelement (5) vorgesehenen Öffnungen (8a; 8b; 8c) auf ihrer einen Seite eine Breite haben, die größer ist als die Breite des zu blockierenden Querträgers (3a; 3b; 3c), und auf ihrer gegenüberliegenden Seite eine Breite haben, die kleiner ist als die Breite

des zu blockierenden Querträgers (3a; 3b; 3c).

5. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Blockierelement (5) mit einer ersten (8a), zweiten (8b) und dritten (8c) Öffnung versehen ist, die vorgesehen sind, um einen ersten (3a), zweiten (3b) bzw. dritten (3c) Querträger zu blockieren, wobei die eine oder mehreren Bruchlinien (10) zwischen der ersten (8a) und zweiten (8b) Öffnung und zwischen der zweiten (8b) und dritten (8c) Öffnung vorgesehen ist/sind.
6. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Blockierelement (5) in seinem Außenumfang mindestens eine Ausnehmung (7) umfasst, die so bemessen ist, dass sie geeignet ist, während der Bewegung des Blockierelements (5) zwischen der ersten und zweiten Stellung als Halterung zu dienen.
7. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Blockierelement (5) aus Kunststoff hergestellt ist.
8. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Zaunpfosten (2) mindestens eine im Wesentlichen flache Rückseite und Vorderseite und mindestens zwei im Wesentlichen flache Seitenflächen umfasst, und dass nach einer Befestigung des Querträgers (3) am Zaunpfosten (2) das Blockierelement (5) an einer der flachen Seitenflächen anliegt.
9. Zaun (1) nach einem der Ansprüche 1 bis 7, **dadurch gekennzeichnet, dass** der Zaunpfosten (2) einen runden Querschnitt hat und nach einer Befestigung des Querträgers (3) am Zaunpfosten (2) das Blockierelement (5) an einer gekrümmten Seitenwand anliegt.
10. Zaun (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Zaunpfosten (2) eine Grundplatte umfasst, um ihn an der darunter liegenden Struktur zu befestigen.

Revendications

1. Clôture (1) comprenant au moins deux piquets de clôture creux (2), entre lesquels au moins deux traverses (3a ; 3b ; 3c) s'étendent, dans laquelle chaque traverse (3a ; 3b ; 3c) s'ajuste dans une ouverture (4) disposée dans le piquet de clôture (2), un élément de blocage en forme de plaque (5) s'étendant dans la cavité du piquet de clôture (2) qui est disposée pour bloquer les traverses (3a ; 3b ; 3c) de manière à empêcher leur déplacement, dans laquelle les traverses (3) sont pourvues, dans leur circon-

férence externe, d'au moins un évidement (6a ; 6b) qui se trouve à l'intérieur de la zone intérieure creuse du piquet de clôture (2), et dans laquelle l'élément de blocage en forme de plaque (5) est déplaçable entre une première position, dans laquelle les traverses (3a ; 3b ; 3c) peuvent être entrées et sorties du piquet de clôture (2), et une seconde position, dans laquelle les traverses (3a ; 3b ; 3c) sont bloquées en place, dans laquelle l'élément de blocage susmentionné (5) comprend au moins deux ouvertures (8a ; 8b ; 8c) positionnées à une distance l'une de l'autre, lesquelles sont chacune disposées pour bloquer une traverse (3a ; 3b ; 3c) de manière à empêcher son déplacement, **caractérisée en ce que** l'élément de blocage susmentionné (5) est pourvu, entre les ouvertures susmentionnées (8a ; 8b ; 8c), d'une ou plusieurs lignes de rupture (10), le long desquelles l'élément de blocage (5) peut être rompu en différents éléments de blocage séparés.

2. Clôture (1) selon la revendication 1, **caractérisée en ce que** la traverse (3) comprend deux évidements (6a et 6b) positionnés l'un en face de l'autre, qui s'étendent en travers du sens longitudinal de la traverse (3).
3. Clôture (1) selon la revendication 1 ou 2, **caractérisée en ce que** les piquets de clôture (2) sont faits de matériau plastique tubulaire, s'étendant de façon essentiellement verticale dans la condition assemblée de la clôture (1), et **en ce que** les traverses (3) sont faites de matériau plastique tubulaire, s'étendant de façon essentiellement horizontale dans la condition assemblée de la clôture.
4. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** les ouvertures (8a ; 8b ; 8c) disposées dans l'élément de blocage (5), sur un premier côté de celles-ci, ont une largeur qui est supérieure à la largeur de la traverse (3a ; 3b ; 3c) destinée à être bloquée, et, sur leur côté opposé, ont une largeur qui est inférieure à la largeur de la traverse (3a ; 3b ; 3c) destinée à être bloquée.
5. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** l'élément de blocage (5) est pourvu de première (8a), deuxième (8b) et troisième (8c) ouvertures, lesquelles sont disposées pour bloquer des première (3a), deuxième (3b) et troisième (3c) traverses respectivement, dans laquelle lesdites une ou plusieurs lignes de rupture (10) sont disposées entre les première (8a) et deuxième (8b) ouvertures, et entre les deuxième (8b) et troisième (8c) ouvertures.
6. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** l'élément de blocage (5) comprend, dans sa circonférence extérieure, au

moins un évidement (7) qui est dimensionné de manière telle qu'il puisse convenablement servir de poignée durant le déplacement de l'élément de blocage (5) entre les première et seconde positions.

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7. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** l'élément de blocage (5) est fait de plastique.

8. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** le piquet de clôture (2) comprend au moins un côté arrière et un côté avant essentiellement plats et au moins deux surfaces latérales essentiellement plates, et **en ce que**, à la suite de la fixation de la traverse (3) au piquet de clôture (2), l'élément de blocage (5) repose contre l'une des surfaces latérales plates.

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9. Clôture (1) selon l'une des revendications 1 à 7, **caractérisée en ce que** le piquet de clôture (2) présente une section transversale ronde et, à la suite de la fixation de la traverse (3) au piquet de clôture (2), l'élément de blocage (5) repose contre une paroi latérale incurvée.

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10. Clôture (1) selon l'une des revendications précédentes, **caractérisée en ce que** le piquet de clôture (2) comprend une plaque de base pour sa fixation à la structure sous-jacente.

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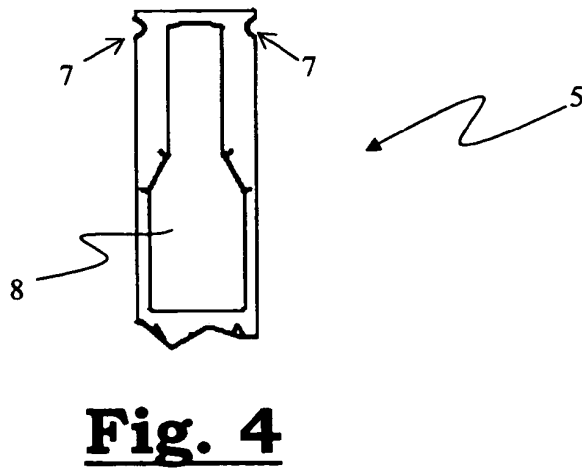
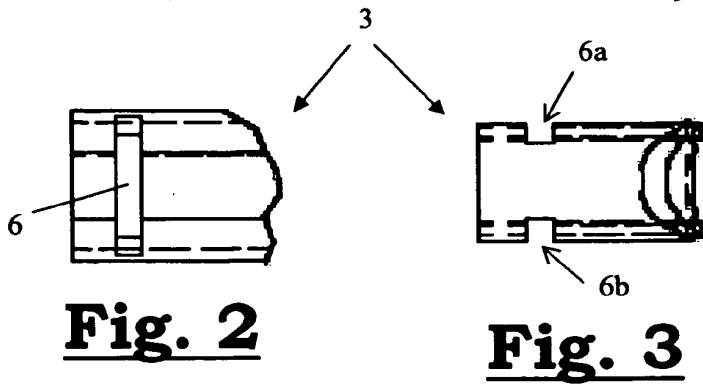
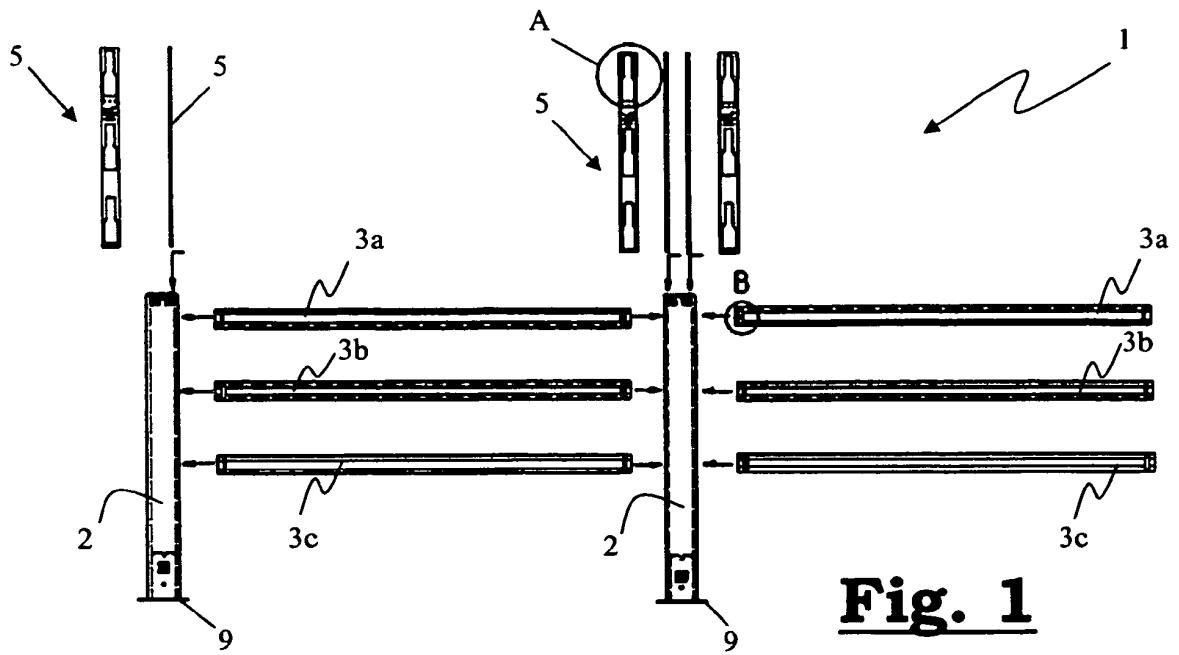
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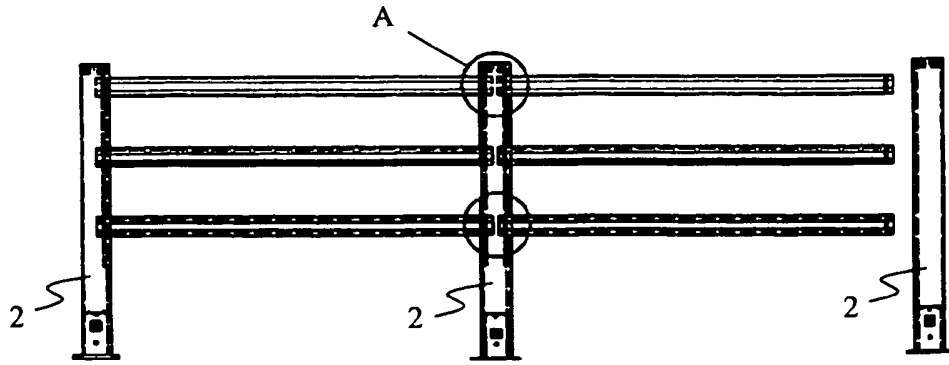


Fig. 5

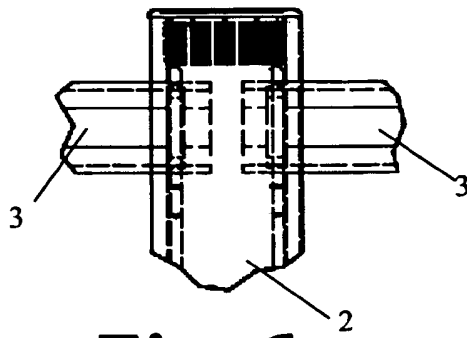


Fig. 6

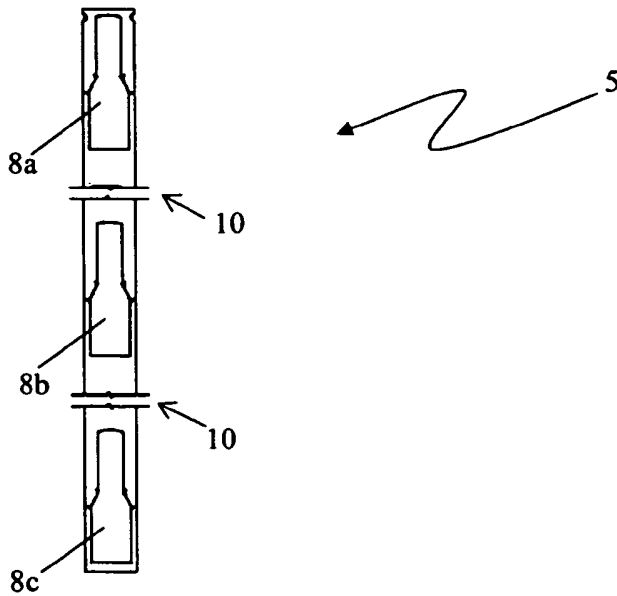


Fig. 7

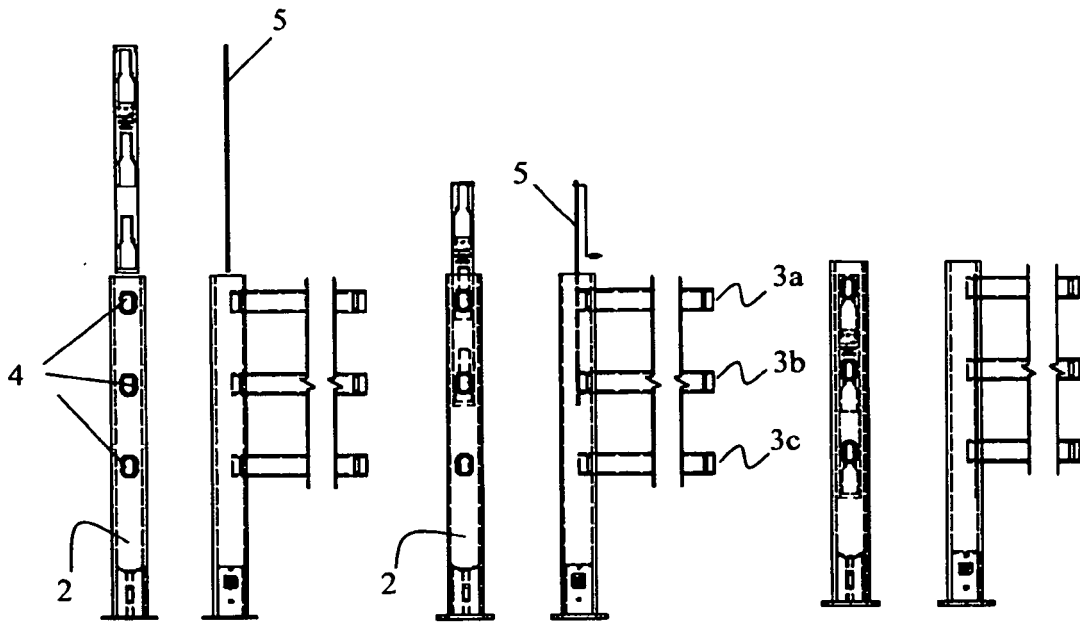


Fig. 8.1

Fig. 8.2

Fig. 8.3

Fig. 8

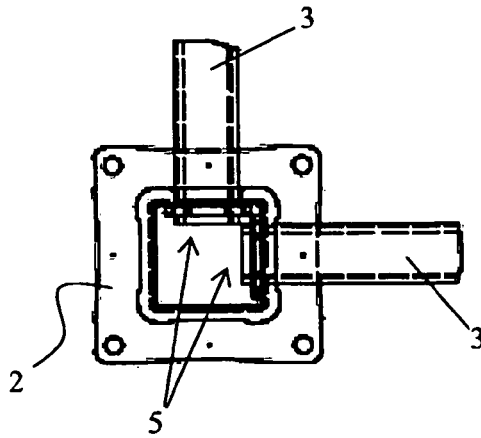


Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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