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- (72) Inventor; and  
(71) Applicant: **HARROP-ALLIN, George Anton** [ZA/ZA];  
21 mt Linsley, Midlands Estate, Midstream Estate,  
Midrand 1692 (ZA).
- (74) Agent: **SIBANDA & ZANTWIJK**; P.O. Box 1615,  
Houghton, 2041, Johannesburg, Gauteng (ZA).
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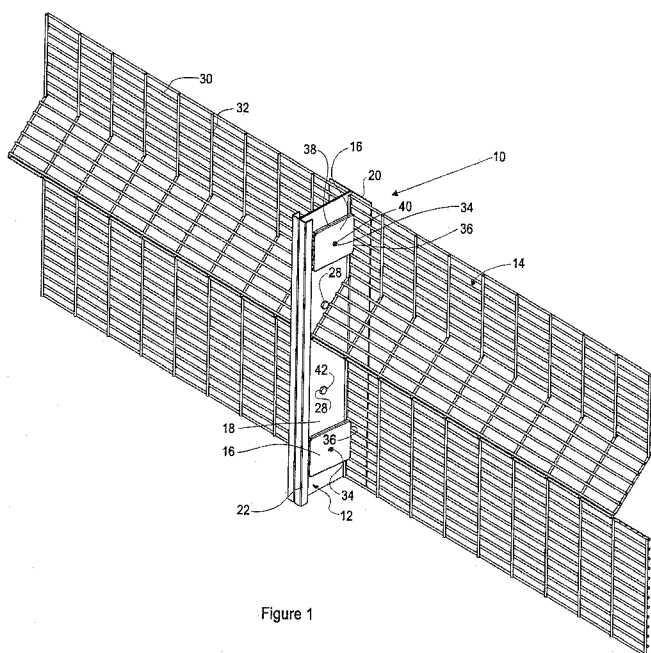


Figure 1

(57) Abstract: A modular fencing system includes a first profile comprising a web (18) and a flange (20) that extends transversely from one end of the web in a first direction. The web defines a countersunk portion (24) that extends towards the first direction, a first aperture (26) in the countersunk portion (24), and a second aperture (28). A second connecting means (40) sized to pass through the second aperture (28), secures the first profile to an adjacent profile in back-to-back arrangement. A bracket (16) is securable to the web (18) via a first connecting means (40) comprising a neck sized to pass through the first aperture (26) and a head sized to be received within the countersunk portion (24). The bracket (16) is shaped to extend towards the flange (20) and defines an edge extending substantially along the flange (20), which edge defines at least two teeth (36) for capturing at least one elongate segment of a fence panel between: (i) the teeth (36); and (ii) the flange (20) and/or web (18) to secure the fence panel (14) in place relative to the first profile.

## MODULAR FENCING SYSTEM

### BACKGROUND

The present invention relates to a modular fencing system. More particularly, the invention relates to a modular fencing system utilising profiles secured in back-to-back arrangement and brackets for securing fencing panels to the profiles.

Building elements comprising profiles secured in back-to-back arrangement are known: US3,698,692 to BURROWS describes a column formed in this manner; US4,369,953 to GREINER and MUSCAT-TYLER describes a fence post connected in back-to-back arrangement by a bolt extending through an aperture defined by the channel web; US8,028,974 and USD566,299 to MANN describe such a fence post with the channel webs defining inwardly directed ribs - a similar arrangement is also described in US6,935,075 to SHERMAN; US7,739,850 to DAUDET, US5,117,599 to VOSS and US2,169,254 to KOTRBATY describe a profile defining inwardly projecting stiffener ribs and an aperture; US4,809,476 to SATCHELL, US4,697,393 to MADRAY and US4,688,358 to MADRAY describe channels with a web defining inwardly extending flutes, apertures and slots; US5,325,651 to MEYER and SARDJONO and US5,157,883 to MEYER describe a channel with: (i) a web defining longitudinal inwardly extending reinforcing ribs and an aperture, and (ii) a locking clip extending between the channel flanges; US4,682,457 to SPENCER describes a channel with a levelling plate captured by the channel flanges and secured to the channel web; US4,369,953 to GREINER and MUSCAT-TYLER describes a fence post connected in back-to-back arrangement by a bolt extending through an aperture defined by the channel web and a bracket secured to the channel web for securing fence beams thereto; and US4,018,020 to SAUER *et al* describes a channel with a web defining an inwardly projecting rib and aperture and an extender web captured within the channel.

A drawback of the above building systems is that they are not specifically designed to enable column profiles to be secured to fencing panels prior to connecting two adjacent profiles together to form a post.

The present invention aims to provide a fencing system that is efficient to install and, to a degree, tamperproof.

### SUMMARY OF THE INVENTION

According to a preferred embodiment of a first aspect of the present invention there is provided a modular fencing system including:

a first profile comprising:

a web;

and a flange that extends transversely from one end of the web in a first direction;

the web defining:

a countersunk portion that extends towards the first direction;

a first aperture in the countersunk portion; and

a second aperture;

a first connecting means comprising:

a neck sized to pass through the first aperture; and

a head sized to be received within the countersunk portion;

a bracket securable to the web via the first connecting means;

a second connecting means sized to pass through the second aperture, for securing the first profile to an adjacent profile in back-to-back arrangement; and

a fence panel including elongate segments,

wherein the bracket is shaped to extend towards the flange and defines an edge extending substantially along the flange, which edge defines at least two teeth for capturing at least one elongate segment of the fence panel between: (i) the teeth; and (ii) the flange and/or web.

Typically, the fence panel is a welded mesh or expanded metal fence panel.

Preferably, the web is generally planar.

Generally, the bracket defines four teeth.

Typically, the bracket is rectangular with a major side extending substantially along the flange.

Preferably, the bracket defines an aperture or cavity for receiving the neck of the first connecting means therein.

Generally, the bracket includes lips extending transversely from its minor sides.

Typically, the height of the lips substantially corresponds to the depth of the countersunk portion.

Preferably, the head of the first connecting means is wholly received within the countersunk portion defined by the web.

The countersunk portion may be circular. Alternatively, according to a second embodiment of the invention, the countersunk portion travels axially along the web and extends towards the first direction.

Typically, the web defines a keyhole in the countersunk portion.

Preferably, the countersunk portion is generally U-shaped in cross section, defining two arms that recess from the web and a substantially planar section extending therebetween.

Generally, the keyhole comprises a first aperture portion defined by one of the arms of the countersunk portion and a second aperture portion defined by the planar section of the

countersunk portion, which second aperture portion extends from, and is narrower than the first aperture portion.

Typically, the first aperture portion of the keyhole extends to the end of the arm of the countersunk portion distal from the planar section of the countersunk portion.

Preferably, the first aperture portion of the keyhole is defined by the arm of the countersunk portion proximal the flange.

Generally, the first aperture portion of the keyhole is at least 15mm wide and at least 5mm in height.

Typically, the second aperture portion of the keyhole is at least 5mm wide and at least 10mm in height.

Preferably, the first aperture portion of the keyhole is sized to receive the head of the first connecting means, side first, and the second aperture portion of the keyhole is sized to permit travel of the neck of the first connecting means therealong as the first connecting means is inserted further into the countersunk portion, the second aperture portion of the keyhole being undersized relative to the head of the first connecting means.

Generally, the bracket defines a countersunk portion sized and shaped for in use receiving at least a portion of the protruding countersunk portion of the web therein.

Typically, the aperture or cavity defined by the bracket is located within the countersunk portion defined by the bracket.

Preferably, the first and second connecting means are bolts.

Generally, the operative bottom ends of the profiles are cast in a concrete body after assembly.

Typically, the modular fencing system further includes a second profile that is a mirrored shape of the first profile.

According to a preferred embodiment of a second aspect of the present invention there is provided a modular fencing system including:

a first profile comprising:

a web;

and a flange that extends transversely from one end of the web in a first direction;

the web defining:

a countersunk portion that extends towards the first direction;

a first aperture in the countersunk portion; and

a second aperture;

a first connecting means comprising:

a neck sized to pass through the first aperture; and

a head sized to be received within the countersunk portion;

a bracket securable to the web via the first connecting means;

a second connecting means sized to pass through the second aperture, for securing the first profile to an adjacent profile in back-to-back arrangement; and

a fence panel including elongate segments,

wherein the fence panel is captured between the bracket and the flange.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described in more detail, by way of examples only, with reference to the accompanying drawings in which:

- Figure 1** is a perspective view of a modular fencing system according to a preferred embodiment of the invention;
- Figure 2** is an exploded first perspective view of the modular fencing system in Figure 1;
- Figure 3** is an exploded second perspective view of the modular fencing system in Figure 1;
- Figure 4** is an enlarged view of a portion of Figure 2;
- Figure 5** is a perspective back view of the bracket in Figure 1;
- Figure 6** is a perspective back view of an alternative embodiment of the bracket for use in the modular fencing system in Figure 1; and
- Figure 7** is a perspective view of a first profile of a modular fencing system according to a second embodiment of the invention.

For the purposes of this specification, the term “keyhole” shall be taken to mean an aperture having first and second portions of different widths.

#### DESCRIPTION OF THE INVENTION

With reference to Figures 1 to 5, according to a preferred embodiment of the invention a modular fencing system 10 is provided.

The fencing system includes a first profile 12, a fence panel 14 and bracket 16.

The first profile 12 comprises a planar, rectangular web 18. A flange 20 extends angularly (typically, orthogonally) from a first major side of the web 18 in a first direction. The flange 20 is also rectangular and planar. However, it could also be curved to form an arc between its fixed and free ends.

A second flange 22 (with a rounded end to reduce the risk of damage should a pedestrian impact it) extends from the other major side of the web 18 in the first direction (i.e. the same direction as the flange 20).

The web 18 defines a pair of countersunk portions 24, where the web 18 has been depressed towards (or, as in this instance, in) the first direction (i.e. the same direction as the flange 20). A first circular aperture 26 is defined at the centre of the countersunk portion 24.

Two circular second apertures 28 are also defined by the web 18. These second apertures 28 are located outside the countersunk portions 24, on the planar surface of the web 18.

The fence panel 14 is in the form of a welded wire fence panel comprising a wire-framed series of parallel horizontal elongate segments 30 in the form of wires, intersected orthogonally by a series of parallel vertical elongate segments 32 in the form of wires.

With specific reference to Figure 5, the bracket 16 is substantially rectangular and defines an aperture 34 at or near its centre. The bracket 16 is sized such that, when the bracket 16 is located on the web 18 with the bracket aperture 34 concentric with the first circular aperture 26, one of the major sides of the bracket 16 runs along the inside of the flange 20. This major side of the bracket 16 is castellated, defining a series of four teeth 36 (three full teeth and two partial-teeth) spaced to define a gap therebetween. The teeth 36 are shaped and sized to locate between the horizontal wires 30.

Lips 38 extend transversely from the minor sides of the bracket 16. The height of the lips 38 corresponds to the depth of the countersunk portion 24, such that the bracket 16 can be located over the countersunk portion 24 without pivoting thereon.

A first connector 40 in the form of a bolt secures the bracket 16 to the web 18. The neck of the bolt 40 is inserted through the first aperture 26 and the bracket aperture 34 and tightened by a nut, while the head of the bolt 40 is received wholly within the countersunk portion 24 so as not to protrude therefrom.

During assembly of the fencing system 10, the welded wire mesh fence panel 14 is located to overlie the inside of the flange 20 and abut the web 18. The bracket 16 is then located on the web 18, with the bracket aperture 34 aligned with the first aperture 26. The position of the welded wire mesh fence panel 14 is then adjusted to locate horizontal wires 30 between



the teeth 36. The first connector 40 is then inserted through the apertures 34 and 26 to secure the bracket 24 to the web and securely capture the welded wire mesh fence panel 14 between: (i) the teeth 36 and flange 20; or (ii) the teeth 36, flange 20 and web 18.

The profile 12 with welded wire mesh fence panel 14 secured thereto is then raised into a vertical position and located adjacent a mirror-shaped profile (with a fence panel similarly secured thereto). As is shown in Figure 1, the two profiles are then positioned to align their second apertures 28. A second connector 42 in the form of a bolt is then inserted through these apertures 28 to secure the profiles 12 to each other in a back-to-back arrangement.

It will be appreciated that the above arrangement simplifies the installation procedure, as the fixing of the welded wire mesh fence panel 14 to the profile 12 and securing of adjacent profiles 12 together can be performed independently. Furthermore, the heads of the bolts 40 securing the brackets 16 to the web 18 are sandwiched between adjacent webs 18, restricting access thereto. In an alternative embodiment, the bracket aperture 34 could be substituted by a threaded cavity to secure the bolt 40 directly to the bracket 16. This would render the connection of the bracket 16 to the web 18 generally tamperproof, requiring the webs 18 of adjacent profiles 12 to be separated to permit access to the first connecting means 40.

When adjacent profiles 12 are secured to each other, the operative lower ends of the profiles 12 can be located within the ground and cast in concrete.

An alternative embodiment of the bracket 116 is shown in Figure 6. This embodiment is similar to the bracket 16 shown in Figures 1 to 5. However, the bracket is square and defines a countersunk portion 144 with aperture 134 at its centre. This countersunk portion 144 is sized and shaped to receive at least a portion of the countersunk portion 24 of the web 18 therein. Furthermore, the lips 138 define teeth so that the bracket 116 can be located on the web 18 with any one of its four sides aligned with the flange 20.

It will be appreciated that the profile 12 could alternatively be a standard channel or angle section, and the fence panel 14 could be formed from an expanded metal sheet.

A second embodiment of the modular fencing system 210 is shown in Figure 7. According to this embodiment, the web 218 defines: (i) a countersunk portion 224 (i.e. a recessed portion) that travels/runs axially along the length of the web 218 and extends in the first direction (i.e. the same direction as the flange 220); and (ii) a first aperture 226 in the form of a keyhole

226 in the countersunk portion 224. The countersunk portion 224 is generally U-shaped in cross section, defining two arms 224a that recess from the web 218 and a substantially planar section 224b therebetween.

The keyhole 226 comprises a first rectangular aperture portion 226a defined by an arm 224a of the countersunk portion 224 and a second rectangular aperture portion 226b defined by the planar section 224b of the countersunk portion 224, which second aperture portion 226b extends from, and is narrower than the first aperture portion 226a. The first aperture portion 226a of the keyhole 226 extends from the planar section 224b of the countersunk portion 224 to the end of the arm 224a distal from the planar section 224a of the countersunk portion 224 - this corresponds to the "height" of the first aperture portion 226a of the keyhole 226; the "width" of the first aperture portion 226a of the keyhole 226 is measured orthogonal to the height).

The first aperture portion 226a of the keyhole 226 is defined by the arm 224a of the countersunk portion 224 proximal the flange 220.

The keyhole 226 is sized to receive and capture the head of a bolt therein. The first aperture portion 226a of the keyhole 226 is at least 15mm (preferably, 20mm) wide and at least 5mm (preferably, 8mm) in height (i.e. corresponding to the size of a bolt head), whereas the second aperture portion 226b of the keyhole 226 is at least 5mm (preferably, 10mm) wide (i.e. corresponding to the width of the neck (i.e. shaft) of a bolt) and at least 10mm (preferably, 15mm) in height.

Two circular second apertures 228 are also defined by the web 218. These second apertures 228 are located outside the countersunk portion 224, on the planar surface of the web 218.

The fence panel and bracket are similar to the fence panel 14 and bracket 16 according to the first embodiment of the invention.

A first connector 240 in the form of a bolt secures the bracket 16 to the web 218.

During assembly of the fencing system 210, the profile 212 is located adjacent a mirror-shaped profile 212. The two profiles are then positioned to align their second apertures 228. A second connector 242 in the form of a bolt is then inserted through these second apertures 228 to secure the profiles 212 to each other in a back-to-back arrangement. The

first connector (i.e. bolt) 240 head is then inserted into the countersunk portion 224 by passing the head sideways through the first aperture portion 226a of the keyhole 226. As the bolt 240 is moved further into the countersunk portion 224, the neck (otherwise referred to as the shaft) of the bolt 240 travels along the second aperture portion 226b of the keyhole 226. When wholly located within the countersunk portion 224, the bolt 240 head is prevented by the undersized second aperture portion 226b of the keyhole 226 from escaping axially from the countersunk portion 224. Furthermore, in this condition, the head of the bolt 240 is received wholly within the countersunk portion 224 (i.e. does not protrude therefrom), and the neck of the bolt 240 extends from the countersunk portion in the first direction via the second aperture portion 226b of the keyhole 226. The profiles 12 are then raised into a vertical position and a welded wire mesh fence panel 14 is located to overlie the inside of the flange 220 and abut the web 218. The bracket 16 is then located on the web 218, with the bracket aperture 34 aligned with the second aperture portion 226b of the keyhole 226 and the neck of the bolt 240 extending through the bracket aperture 34. The position of the welded wire mesh fence panel 14 is then adjusted to locate horizontal wires 30 between the teeth 36, and a nut is tightened on the neck of the bolt 240 to secure the bracket 16 to the web 218 and securely capture the welded wire mesh fence panel 14 between: (i) the teeth 36 and flange 220; or (ii) the teeth 36, flange 220 and web 218.

Since the bracket 16 abuts the flange 220, the bracket 16 prevents the bolt 240 from escaping the countersunk portion 224 via the first aperture portion 226a of the keyhole 226.

The keyhole 226 simplifies the installation procedure, as the bracket 16 and welded wire mesh fence panel 14 can be fixed to the profile 212 after two profiles 212 have been connected in back-to-back arrangement.

It will be appreciated that the first and second aperture portions 226a and 226b of the keyhole 226 could both be defined on the substantially planar section 224b of the recessed portion 224.

Although prior art systems defined apertures in profile webs, they did not define keyholes - the system described in US5,325,651 defines a circular aperture and not a keyhole; furthermore, although US 4,018,020, US 4,809,476 and US5,117,599 show a countersunk portion defining an aperture, which aperture extends along the arms of the countersunk portion, these apertures are similarly not keyholes and cannot be used to capture a bolt head within the countersunk portions.

CLAIMS

1. A modular fencing system including:

a first profile comprising:

a web;

and a flange that extends transversely from one end of the web in a first direction;

the web defining:

a countersunk portion that extends towards the first direction;

a first aperture in the countersunk portion; and

a second aperture;

a first connecting means comprising:

a neck sized to pass through the first aperture; and

a head sized to be received within the countersunk portion;

a bracket securable to the web via the first connecting means;

a second connecting means sized to pass through the second aperture, for securing the first profile to an adjacent profile in back-to-back arrangement; and

a fence panel including elongate segments,

wherein the bracket is shaped to extend towards the flange and defines an edge extending substantially along the flange, which edge defines at least two teeth for capturing at least one elongate segment of the fence panel between: (i) the teeth; and (ii) the flange and/or web.

2. A modular fencing system according to claim 1, wherein the fence panel is a welded mesh or expanded metal fence panel.
3. A modular fencing system according to claim 2, wherein the web is generally planar.
4. A modular fencing system according to claim 3, wherein the bracket defines four teeth.
5. A modular fencing system according to claim 4, wherein the bracket is rectangular with a major side extending substantially along the flange.
6. A modular fencing system according to claim 5, wherein the bracket defines an aperture or cavity for receiving the neck of the first connecting means therein.
7. A modular fencing system according to claim 6, wherein the bracket includes lips extending transversely from its minor sides.
8. A modular fencing system according to claim 7, wherein the height of the lips substantially corresponds to the depth of the countersunk portion.
9. A modular fencing system according to claim 8, wherein the head of the first connecting means is wholly received within the countersunk portion defined by the web.
10. A modular fencing system according to claim 9, wherein the countersunk portion is circular.
11. A modular fencing system according to claim 9, wherein the countersunk portion travels axially along the web and extends towards the first direction.
12. A modular fencing system according to claim 11, wherein the web defines a keyhole in the countersunk portion.
13. A modular fencing system according to claim 12, wherein the countersunk portion is generally U-shaped in cross section, defining two arms that recess from the web and a substantially planar section extending therebetween.

14. A modular fencing system according to claim 13, wherein the keyhole comprises a first aperture portion defined by one of the arms of the countersunk portion and a second aperture portion defined by the planar section of the countersunk portion, which second aperture portion extends from, and is narrower than the first aperture portion.
15. A modular fencing system according to claim 14, wherein the first aperture portion of the keyhole extends to the end of the arm of the countersunk portion distal from the planar section of the countersunk portion.
16. A modular fencing system according to claim 15, wherein the first aperture portion of the keyhole is defined by the arm of the countersunk portion proximal the flange.
17. A modular fencing system according to claim 16, wherein the first aperture portion of the keyhole is at least 15mm wide and at least 5mm in height.
18. A modular fencing system according to claim 17, wherein the second aperture portion of the keyhole is at least 5mm wide and at least 10mm in height.
19. A modular fencing system according to claim 18, wherein the first aperture portion of the keyhole is sized to receive the head of the first connecting means, side first, and the second aperture portion of the keyhole is sized to permit travel of the neck of the first connecting means therealong as the first connecting means is inserted further into the countersunk portion, the second aperture portion of the keyhole being undersized relative to the head of the first connecting means.
20. A modular fencing system according to either claim 10 or claim 19, wherein the bracket defines a countersunk portion sized and shaped for in use receiving at least a portion of the protruding countersunk portion of the web therein.
21. A modular fencing system according to claim 20, wherein the aperture or cavity defined by the bracket is located within the countersunk portion defined by the bracket.
22. A modular fencing system according to claim 21, wherein the first and second connecting means are bolts.

23. A modular fencing system according to claim 22, wherein the operative bottom ends of the profiles are cast in a concrete body after assembly.
24. A modular fencing system according to claim 23 further including a second profile that is a mirrored shape of the first profile.
25. A modular fencing system including:
- a first profile comprising:
    - a web;
    - and a flange that extends transversely from one end of the web in a first direction;
    - the web defining:
      - a countersunk portion that extends towards the first direction;
      - a first aperture in the countersunk portion; and
      - a second aperture;
  - a first connecting means comprising:
    - a neck sized to pass through the first aperture; and
    - a head sized to be received within the countersunk portion;
  - a bracket securable to the web via the first connecting means;
  - a second connecting means sized to pass through the second aperture, for securing the first profile to an adjacent profile in back-to-back arrangement; and
  - a fence panel including elongate segments,
- wherein the fence panel is captured between the bracket and the flange.

26. A modular fencing system according to claim 25, wherein the wherein the bracket defines teeth along its edge adjacent the flange.
27. A modular fencing system according to claim 26, wherein at least one elongate segment of the fence panel is captured between the teeth, the web and the flange.
28. A modular fencing system according to claim 27, wherein the bracket is rectangular with a major side extending substantially along the flange.
29. A modular fencing system according to claim 28, wherein the bracket defines an aperture or cavity for receiving the neck of the first connecting means therein.
30. A modular fencing system according to claim 29, wherein the bracket includes lips extending transversely from its minor sides.
31. A modular fencing system according to claim 30, wherein the height of the lips substantially corresponds to the depth of the countersunk portion.
32. A modular fencing system according to claim 31, wherein the first aperture is a keyhole.
33. A modular fencing system according to claim 32 further including a second profile that is a mirrored shape of the first profile.



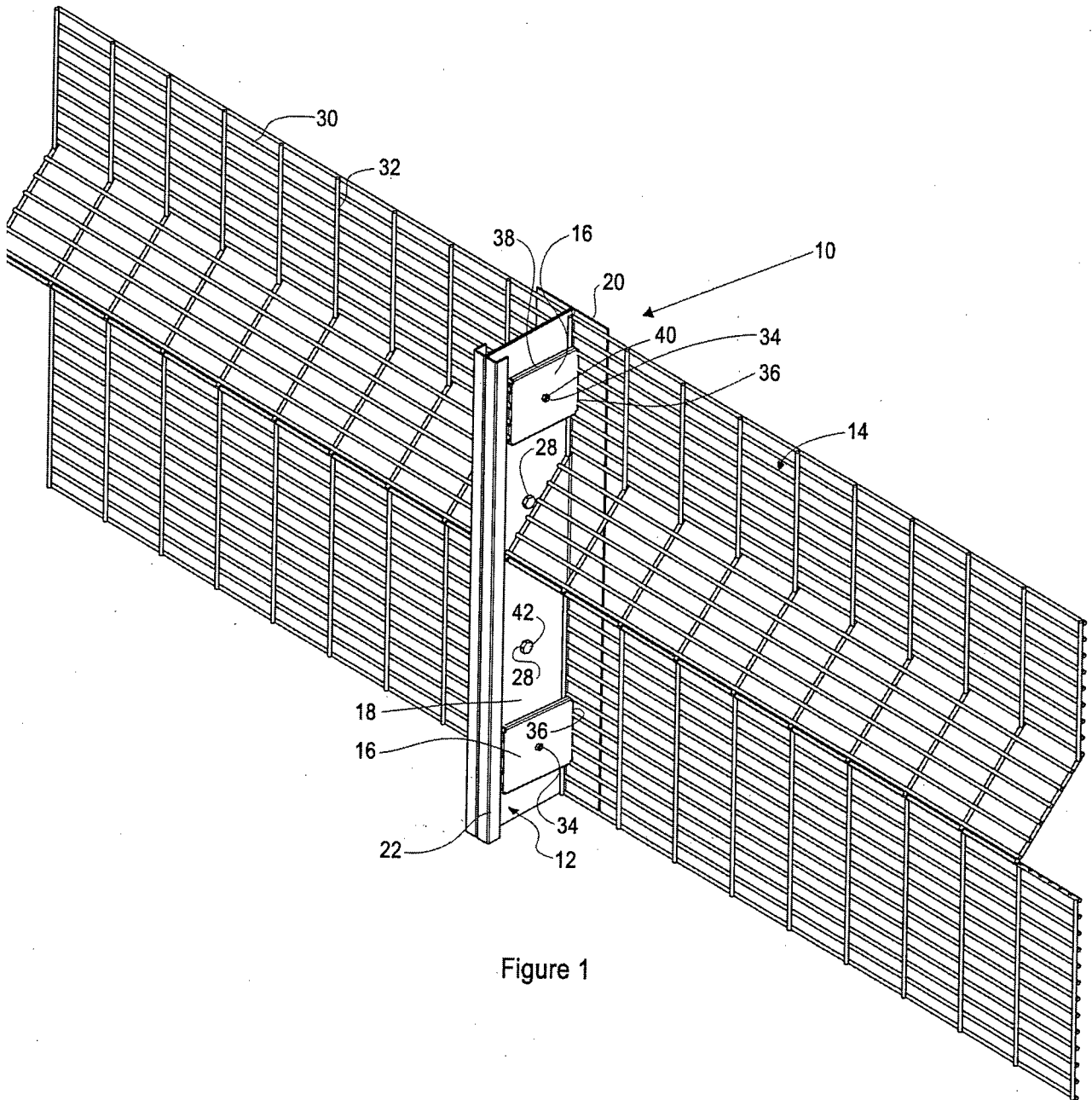


Figure 1

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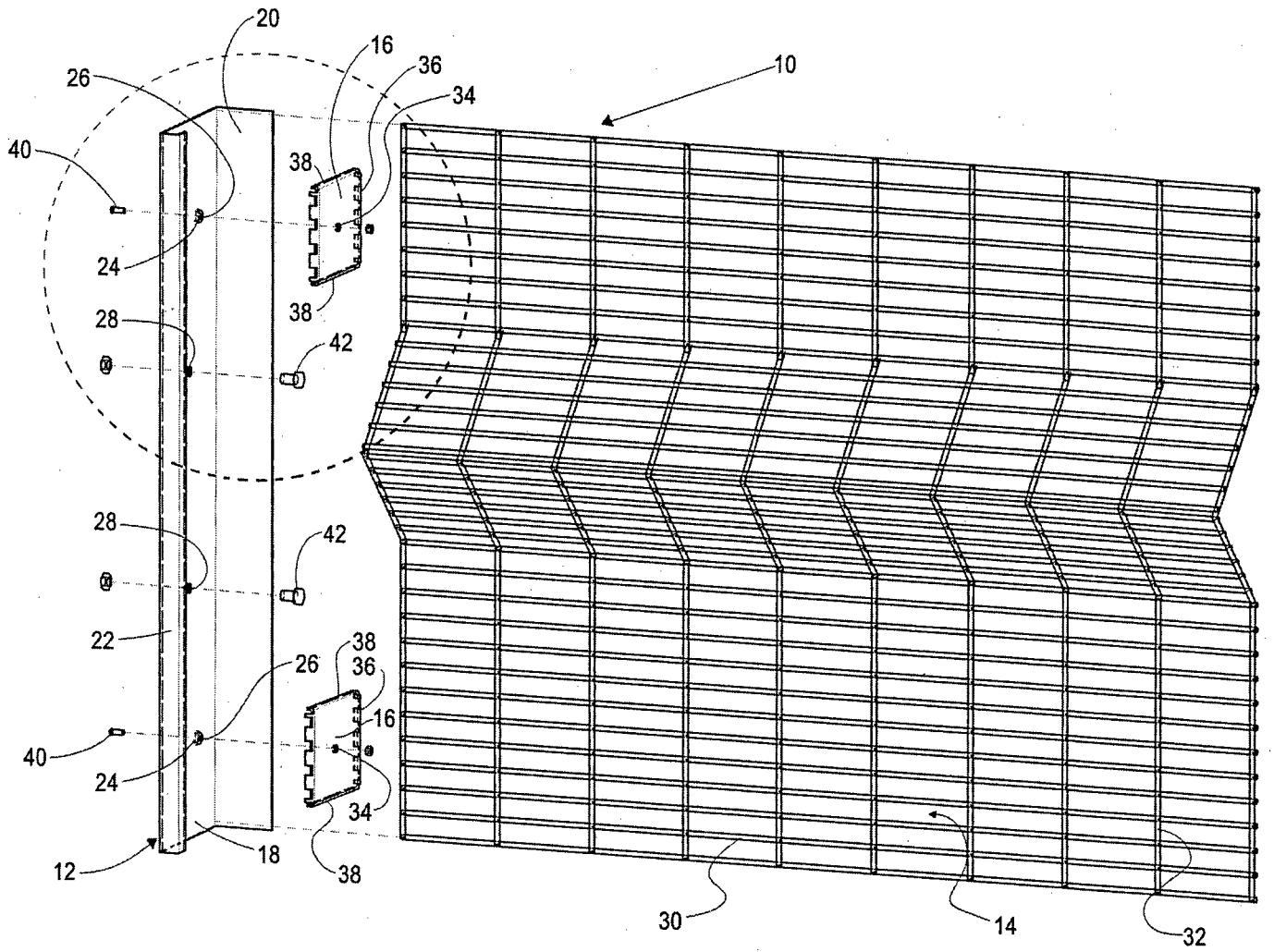


Figure 2

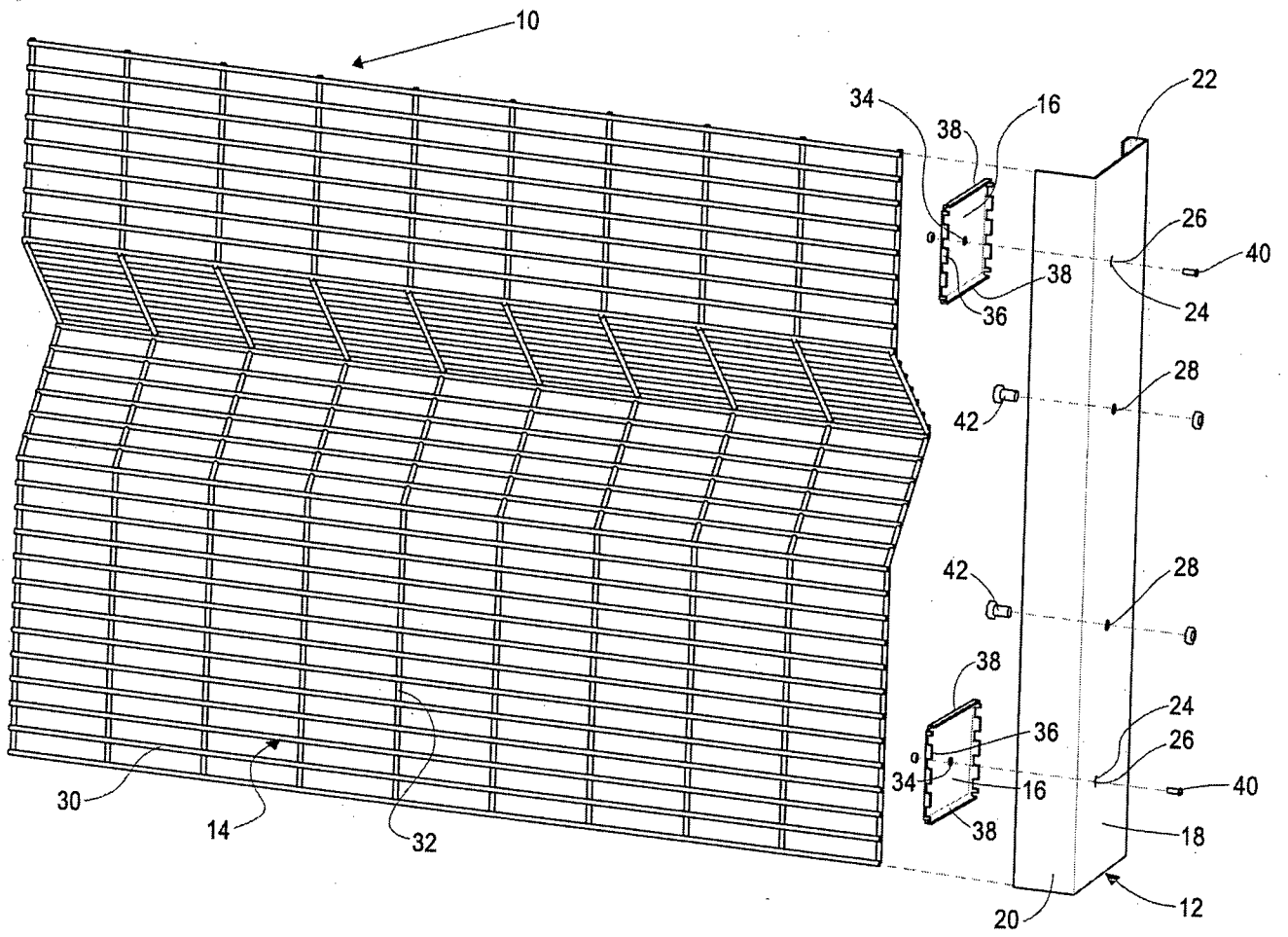


Figure 3

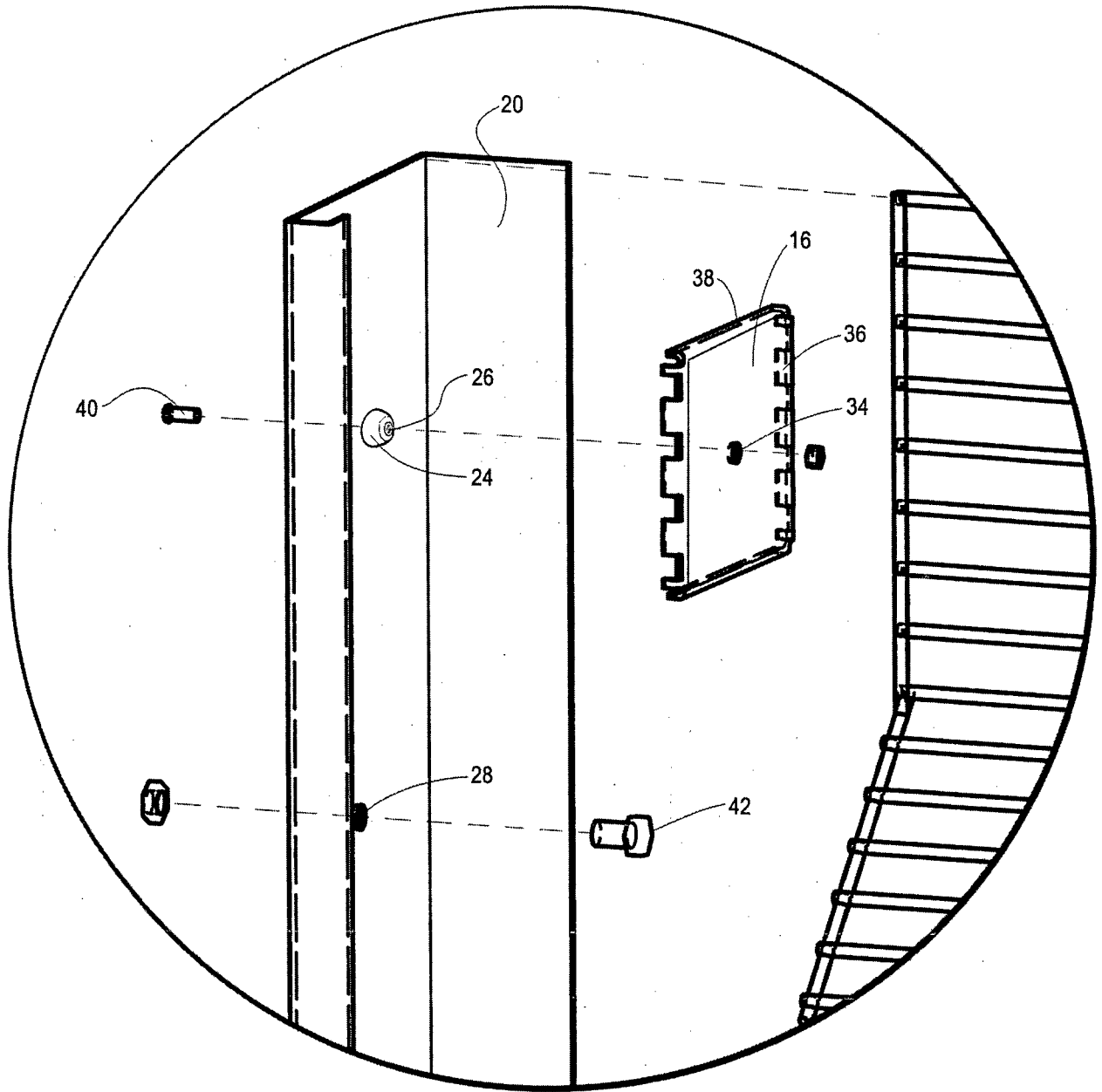


Figure 4

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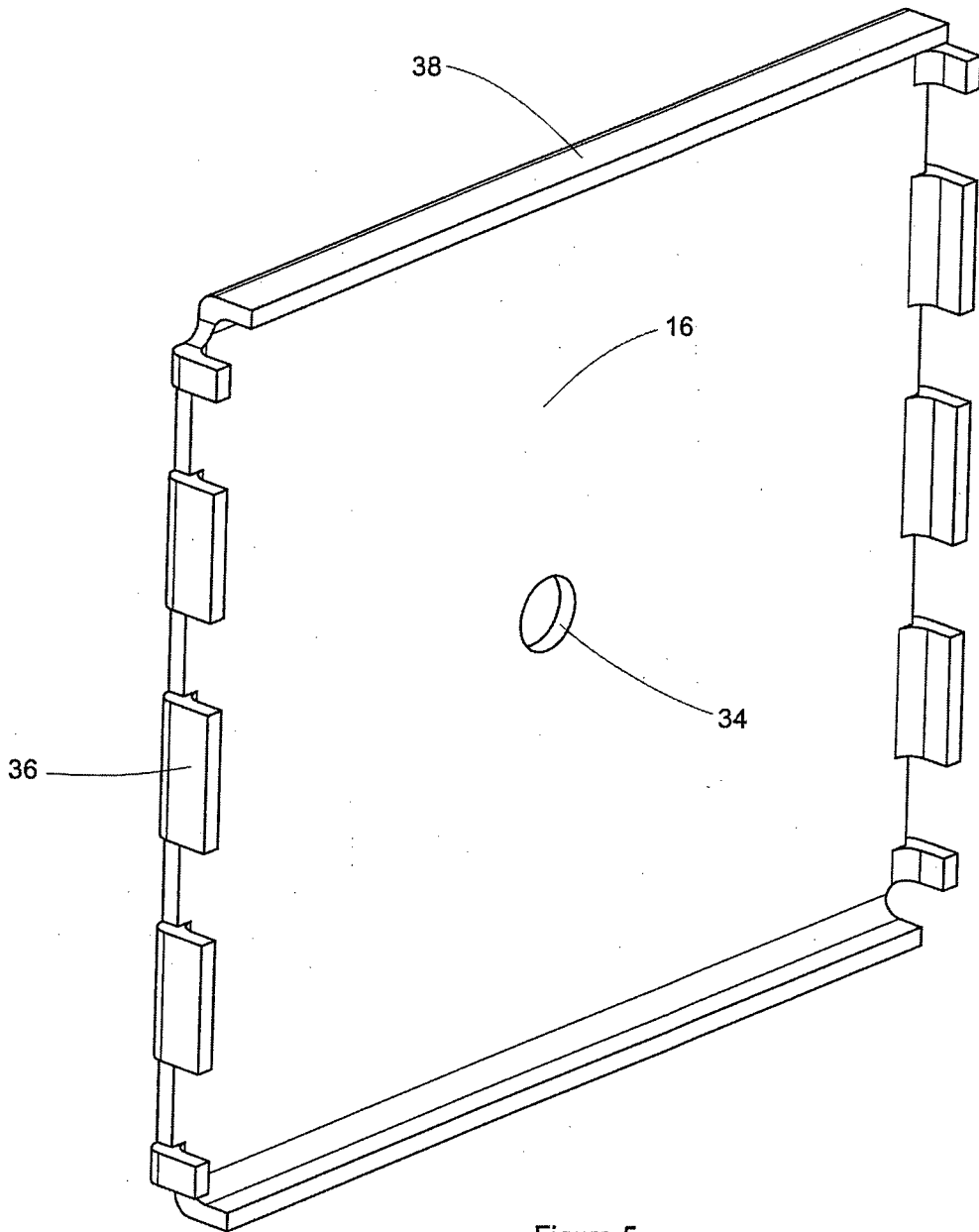


Figure 5

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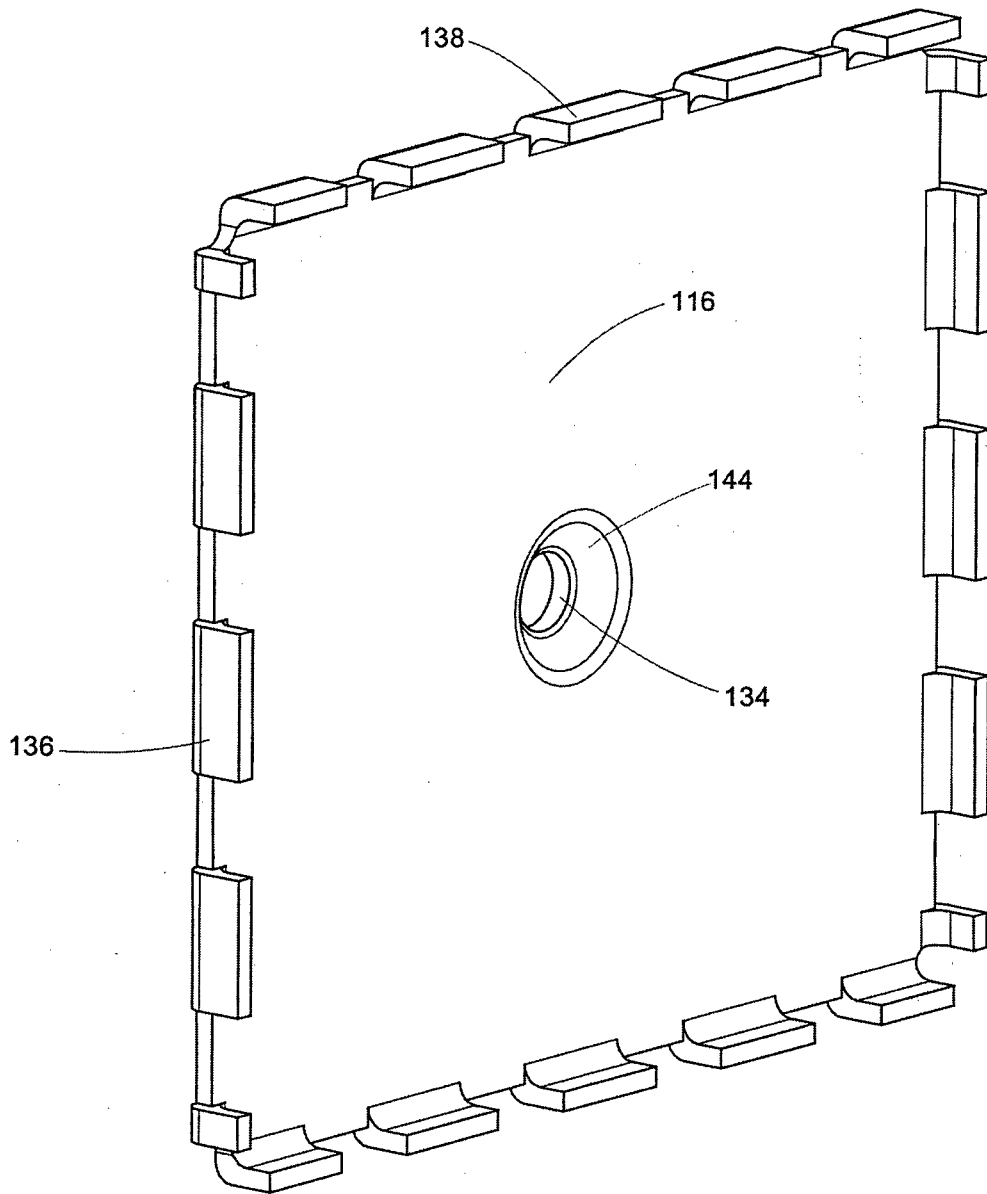


Figure 6

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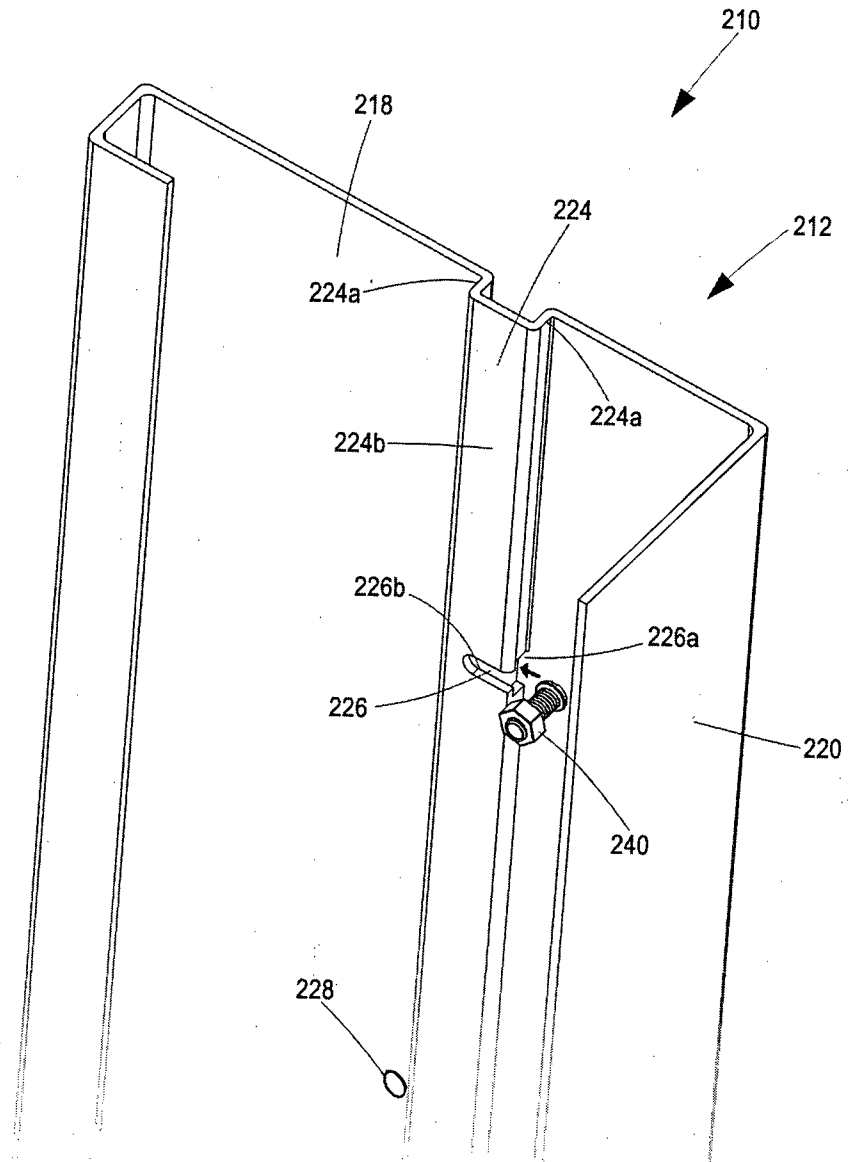


Figure 7

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT / ZA 2013/000067

<p><b>A. CLASSIFICATION OF SUBJECT MATTER</b>                  IPC: <b>E04H 17/16</b> (2006.01)                  According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p><b>B. FIELDS SEARCHED</b>                  Minimum documentation searched (classification system followed by classification symbols)                  E04H                  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)                  EPODOC; WPI</p>		
<p><b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b></p>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2010121789 A2 (BETAFENCE HOLDING NV, DENEYER KERLIJNE JOANNA ELISABETH) 28 October 2010 (28.10.2010) description, page 6 - 9; figures 1 - 7	1 - 33
A	EP 1712710 A1 (BETAFENCE HOLDING NV) 18 October 2006 (18.10.2006) description, paragraphs [0011] - [0020]; figures 1 - 8	1 - 33
A	FR 2824348 A1 (GROUPE PERIMETRE) 08 November 2002 (08.11.2002) abstract; figur 1	1 - 33
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		<input checked="" type="checkbox"/> See patent family annex.
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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

PCT / ZA 2013/000067

Patent document cited in search report			Patent family member(s)			Publication date
WO	A2	2010121789	CN	A	102414383	2012-04-11
			AU	A1	2010238793	2011-10-27
			SG	A1	174918	2011-11-28
			WO	A2	2010121789	2010-10-28
EP	A1	1712710	EP	A1	1712710	2006-10-18
FR	A1	2824348	FR	A1	2824348	2002-11-08