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

(11) EP 2 186 972 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
19.05.2010 Bulletin 2010/20

(51) Int Cl.:
E04H 17/16 *(2006.01)*

(21) Application number: **09176084.3**

(22) Date of filing: **16.11.2009**

(84) Designated Contracting States:
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 SE SI SK SM TR

(30) Priority: **18.11.2008 US 272987**

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(54) Security partition system and universal clip for such system

(57) A security partition system (10) comprises an assembly of components, including:
a) a vertical post ((12a; 12b) having at least one vertical slot (14),
b) a panel (16) comprising evenly spaced horizontal and vertical wires (18, 20) bordering square openings, and
c) a clip (24) for connecting the panel to the post. The clip comprises:
(i) a front plate (26) having a finger (28a; 28b) projecting rearwardly from one side thereof and being configured and dimensioned to span the gap between and to overlap the vertical wires (20) bordering one of the panel openings along an edge of the panel, with the finger arranged outside of the edge;
(ii) a back plate (30) configured and dimensioned to span the gap between and to overlap the horizontal wires (18) bordering the same panel opening; and
(iii) a fastener (34, 36) for interconnecting and urging the back and front plates (30; 26) together, with the finger being received in the vertical slot (14) in the post (12) to thereby connect the panel to the post.

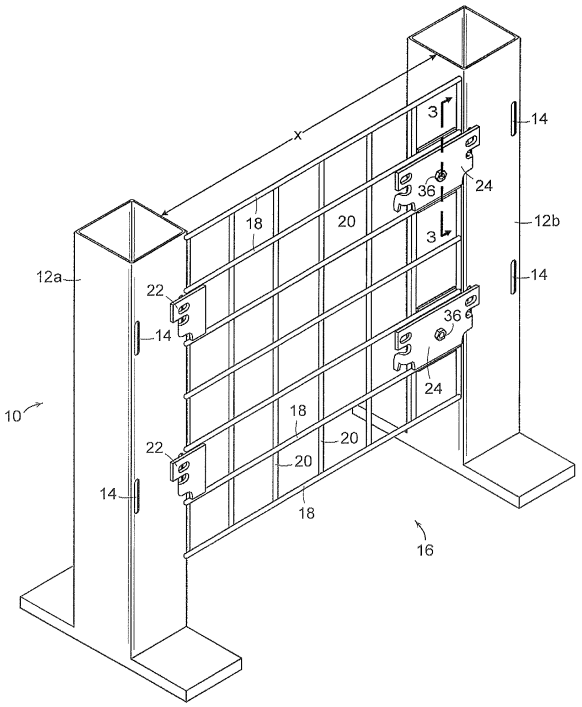

FIG. 1

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Description

Field of the Invention

[0001] This invention relates to security partition systems employing wire panels secured to and interconnected by vertical support posts, and is concerned in particular with a universal clip used to connect the panels to the support posts.

Description of the Prior Art

[0002] Conventional security partition systems are prefabricated with standard length wire panels. The wire panels have integral attachment clips at their ends designed to mechanically interengage in pre-positioned slots in the support posts.

[0003] The partition systems are normally shipped in a disassembled state, and are designed for on site erection. Space limitations at the site may dictate that one or more of the panels be shortened. Doing so necessitates trimming and removing end sections carrying the integral attachment clips, which leaves the trimmed panel edges without a means of attachment to the support posts.

[0004] The universal clip of the present invention is designed to be attached, at the erection site, to the trimmed edge at either end of a shortened panel to thereby serve as a means for connecting the shortened panel to a support post.

SUMMARY OF THE INVENTION

[0005] In accordance with the present invention, a security partition system comprises an assembly of components, including a plurality of laterally spaced vertical support posts with vertical slots, and a plurality of panels comprised of evenly spaced horizontal and vertical wires bordering square openings.

[0006] Clips serve to connect the panels to the support posts. The clips comprise:

(i) a front plate configured and dimensioned to span the gap between and to overlap the vertical wires bordering an opening along an edge of the panel, with a finger projecting from at least one side of the front plate and being arranged outside of the panel edge;

(ii) a back plate configured and dimensioned to span the gap between and to overlap the horizontal wires bordering the same opening, with peripheral flanges on the back plate mechanically engaging the horizontal wires; and

(iii) a fastener interconnecting and urging the front and back plates together, with the finger on the front plate received in the vertical slot of a support post to thereby establish a connection therebetween.

[0007] Preferably, the front plate is provided with fingers at both of its sides, thus adapting the clip for attachment to either end of the panel. Each finger is preferably hook-shaped for mechanical engagement with the bottom edge of the vertical slot in the support post.

[0008] The front plate is preferably provided with an additional coplanar side flange adjacent to each finger, with an aperture in the side flange through which a locking pin may be inserted and tapped into place in the vertical slot to retain the finger in mechanical engagement with the bottom edge of the slot.

[0009] These and other features and advantages of the present invention will now be described in further detail with reference to the accompanying drawings, wherein:

BRIEF DESCRIPTION OF THE DRAWINGS:

[0010]

Figure 1 is a perspective view of an exemplary section of a security partition system in accordance with the present invention;

Figure 2 is an exploded view of the clip;

Figure 3 is a vertical sectional view on an enlarged scale taken along line 3-3 of Figure 1; and

Figure 4 is a horizontal sectional view taken along line 4-4 of Figure 3.

DETAILED DESCRIPTION

[0011] With reference initially to Figure 1, a security partition system in accordance with the present invention is generally depicted at 10. The system includes vertical posts 12a, 12b with vertical slots indicated typically at 14. A wire panel 16 spans the gap between the posts. The panel comprises evenly spaced horizontal and vertical wires 18, 20 bordering square opening.

[0012] In Figure 1, the left hand side of the panel 16 is shown equipped with standard permanently attached clips 22 serving to secure the panel to post 12a. However, because the distance "X" between the posts is less than the standard length of the panel, the right hand side of the panel has been trimmed, resulting in the standard clips at that side having been removed with the trimmed panel segment. Clips 24 in accordance with the present invention provide the means for securing the trimmed edge of the panel to the post 12b.

[0013] With reference additionally to Figures 2-4, it will be seen that each clip 24 comprises a front plate 26 having at least one and preferably two fingers 28a, 28b, projecting rearwardly from each side. The front plate is configured and dimensioned to span the gap between and to overlap the vertical wires 20 bordering an opening along the trimmed edge of the panel. When the front plate is thus positioned, its finger 28b is arranged outside of the trimmed panel edge. If the front plate was being positioned along a trimmed edge at the opposite side of the panel, then finger 28a would be arranged outside that

edge. The front plate thus adapts the clip for universal application to a trimmed edge at either panel side.

[0014] A back plate 30 is configured and dimensioned to span the gap between and to overlap the horizontal wires 18 bordering the same opening. Forwardly projecting peripheral flanges 32 on the back plate are arranged to mechanically engage the horizontal wires 18.

[0015] Fastening means in the form of a threaded screw 34 and nut 36 serves to urge the front and back plates together to thereby attach the clip 24 at the trimmed edge of the panel.

[0016] The fingers 28 are sized to enter respective vertical slots 14 in the support posts 12a, 12b, and are preferably hook-shaped to mechanically engage the bottom edges of the slots.

[0017] The front plate 26 is preferably additionally provided with coplanar side flanges 38 adjacent to and above the fingers 28. The flanges 38 have apertures 40 designed to accept locking pins 42. The locking pins are inserted through the apertures and are tapped into place in the slots 14 to thereby lock the fingers 28 into mechanical engagement within the slots.

[0018] In light of the foregoing, it will now be evident to those skilled in the art that the clips 24 of the present invention are readily attachable to the trimmed sides of the panels, thus making it possible to accommodate on site shortening of the panel lengths. With finger 28 at both sides of the front plates 26, the clips are designed for universal application to either panel edge.

Claims

1. A security partition system (10) comprising an assembly of components, including:

   a) a vertical post (12a, 12b) having at least one vertical slot (14),
   b) a panel (16) comprising evenly spaced horizontal and vertical wires (18, 20) bordering square openings, and
   c) a clip (24) for connecting said panel to said post, said clip comprising:

      (i) a front plate (26) having a finger (28a; 28b) projecting rearwardly from one side thereof, said front plate being configured and dimensioned to span the gap between and to overlap the vertical wires (20) bordering one of said openings along an edge of said panel, with said finger arranged outside of said edge;
      (ii) a back plate (30) configured and dimensioned to span the gap between and to overlap the horizontal wires (18) bordering the said one opening; and
      (iii) fastening means (34, 36) for interconnecting and urging said back and front plates (30; 26) together,

   said finger (28a; 28b) being received in said vertical slot (14) to thereby connect said panel to said post (12).

2. The security partition system (10) of claim 1 further comprising forwardly projecting peripheral flanges (32) on said back plate (30), said flanges being arranged to mechanically engage said horizontal wires (18).

3. A clip (24) for attaching a panel comprised of evenly spaced horizontal and vertical wires (18, 20) defining square openings to a post (12) having a vertical slot (14), said clip comprising:

   (i) a front plate (26) having a finger (28a; 28b) projecting rearwardly from one side thereof, said front plate being configured and dimensioned to span the gap between and to overlap the vertical wires (20) bordering one of said openings along an edge of said panel, with said finger arranged outside of said edge;
   (ii) a back plate (30) having forwardly projecting peripheral flanges (32), said back plate being configured and dimensioned to span the gap between and to overlap the horizontal wires (18) bordering the said one opening, with said peripheral flanges mechanically engaging said horizontal wires; and
   (iii) fastening means (34, 36) for interconnecting and urging said back and front plates (26; 30) together,

   said finger (28a; 28b) being receivable in said vertical slot (14) to thereby connect said panel to said post (12).

4. The clip (24) of claim 3 wherein said front plate (26) is provided with an additional rearwardly projecting finger (28b) at an opposite side thereof.

5. The clip (24) of claim 3 or claim 4 wherein said finger (28a; 28b) is hook shaped and configured for mechanical engagement with a bottom edge of said slot (14).

6. The clip (24) of any one of claims 3 to 5 wherein said front plate (26) is additionally provided with a coplanar side flange (38) adjacent to said finger (28a; 28b), said side flange having an aperture (40) through which a locking pin (42) may be inserted into said slot (14) to retain said finger in mechanical engagement with the bottom edge of said slot.

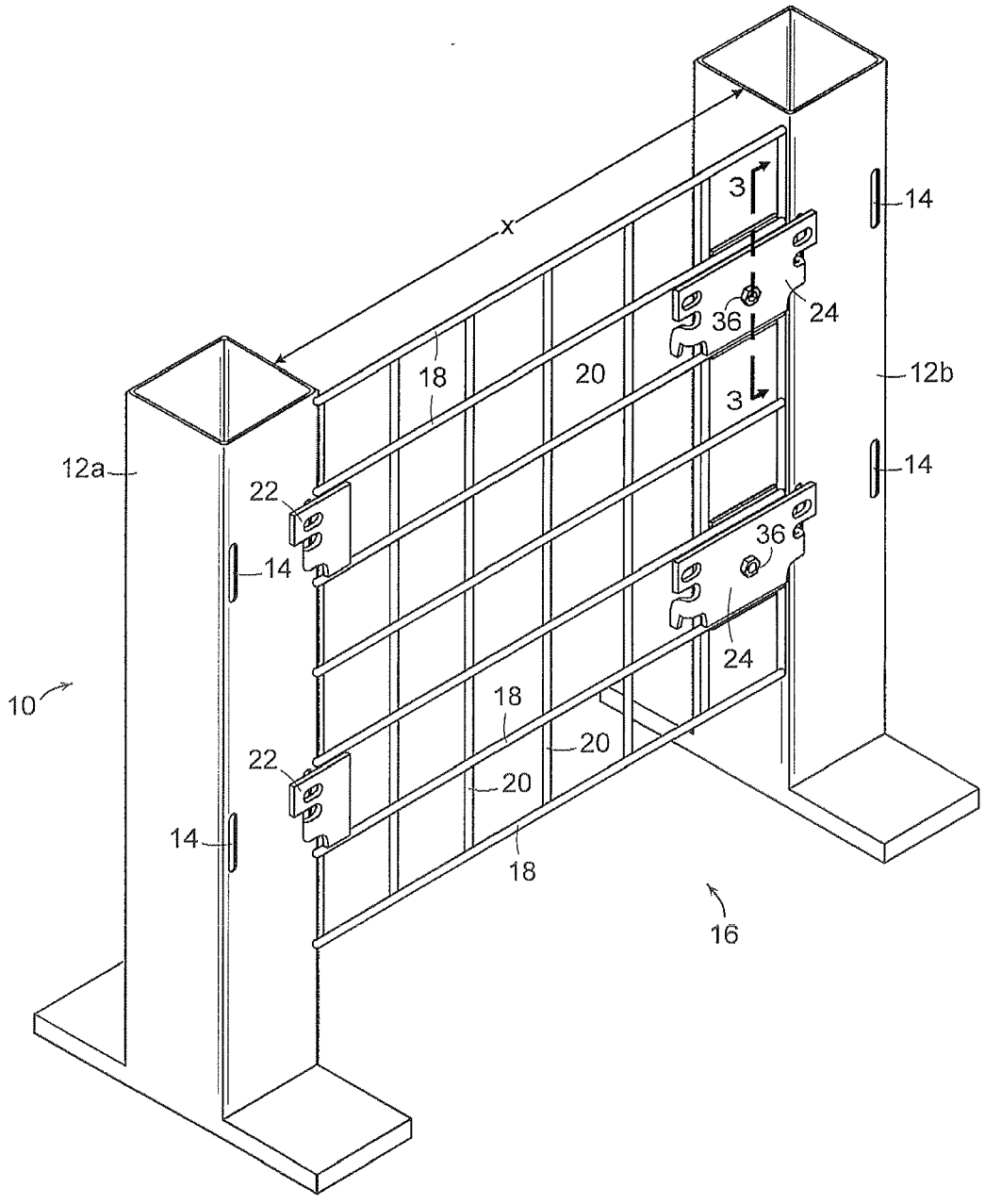

FIG. 1

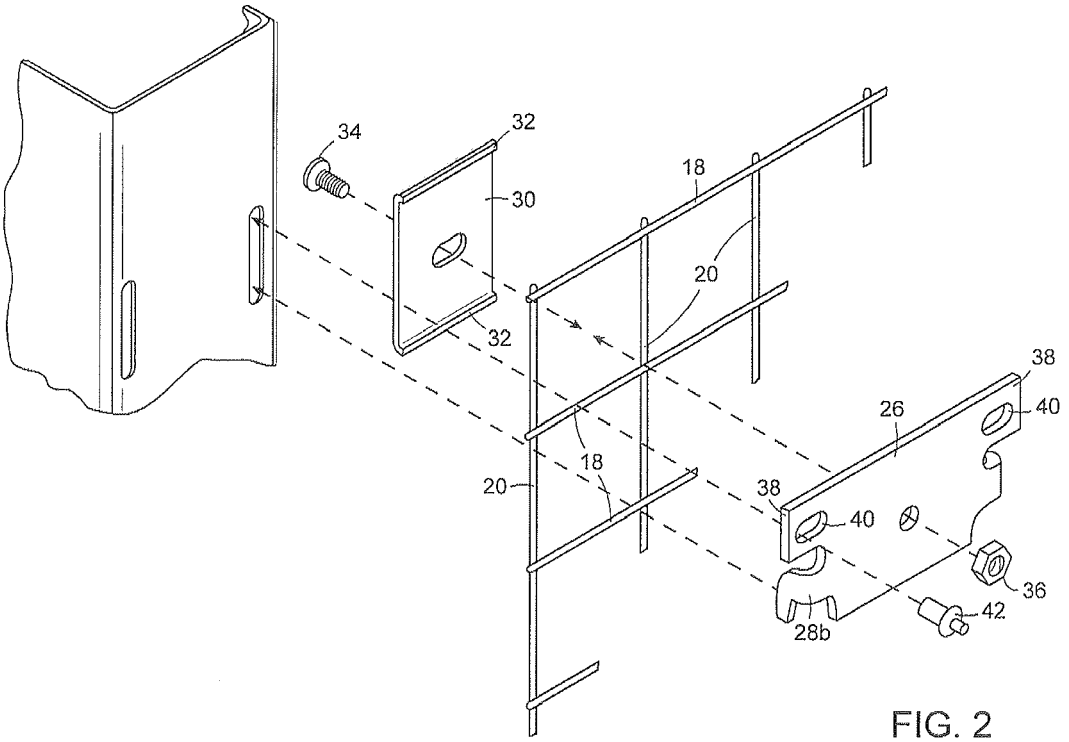

FIG. 2

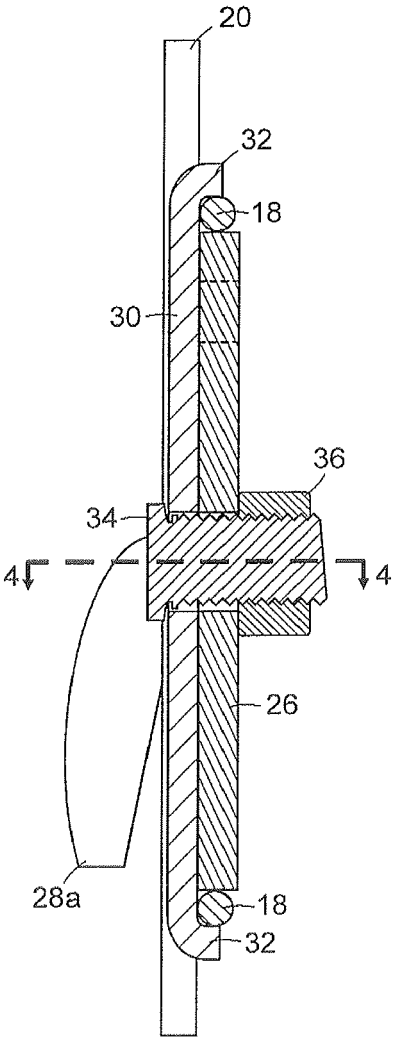

FIG. 3

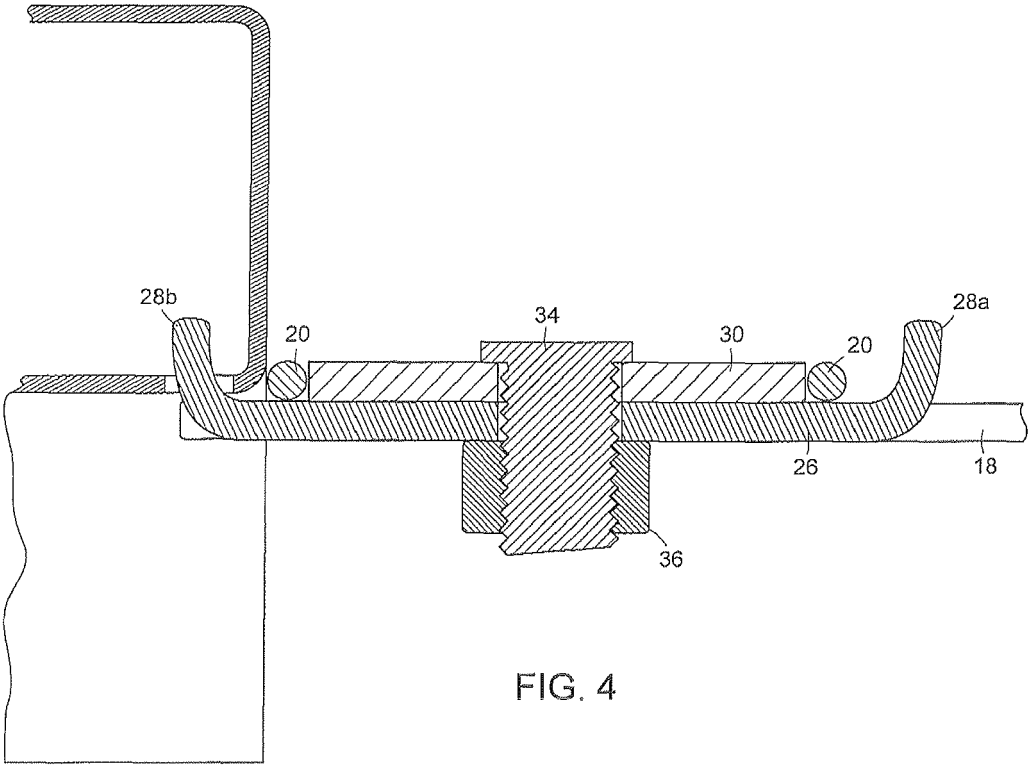

FIG. 4