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(54) **Security partition system with a clip for connecting the panel**

Sicherheitsabtrennungssystem mit einer Klemme um ein Panel zu befestigen

Système de cloison de sécurité avec un clip pour accrocher un panneau

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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 document US 5 746 040 A discloses a security partition system with all the features of the preamble of claim 1.

[0004] 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.

[0005] 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

[0006] 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.

[0007] 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.

[0008] 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 hook-shaped for mechanical engagement with the bottom edge of the vertical slot in the support post.

[0009] 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.

[0010] 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:

[0011]

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

[0012] 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.

[0013] 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.

[0014] With reference additionally to Figures 2-4, it will be seen that each clip 24 comprises a front plate 26 having 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.

[0015] 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.

[0016] 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.

[0017] The fingers 28 are sized to enter respective vertical slots 14 in the support posts 12a, 12b, and are hook-shaped to mechanically engage the bottom edges of the slots.

[0018] 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.

[0019] 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 further including
   c) a clip (24) for connecting either side edge of said panel to said post, said clip comprising:

      (i) a front plate (26) having a first finger (28a; 28b) projecting reawardly 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 first 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; 36) together,

   said first finger (28a; 28b) being received in said vertical slot (14) to thereby connect said panel to said post (12) and **characterised in that** said front plate (26) with said first finger (28a; 28b) on one side thereof further comprises a second reawardly projecting finger (28a; 28b) at an opposite side thereof and that each of said fingers (28a, 28b) is hook shaped and configured for mechanical engagement with a bottom edge of said slot (14).

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. The security partition system (10) of claim 1 or claim 2, wherein said front plate (26) of said clip (24) is additionally provided with a coplanar side flange (38) adjacent to each of said fingers (28a; 28b), each of said side flanges 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.

Patentansprüche

1. Sicherheitstrennwandsystem (10), das eine Anordnung von Komponenten umfasst, aufweisend:

   a) einen vertikalen Ständer (12a, 12b) mit wenigstens einem vertikalen Schlitz (14),
   b) ein Paneel (16), das gleichmäßig beabstandete horizontale und vertikale Drähte (18, 20) umfasst, welche viereckige Öffnungen begrenzen, und weiterhin aufweisend
   c) eine Klemme (24) zum Verbinden einer von beiden Seitenkanten des Paneels mit dem Ständer, wobei die Klemme umfasst:

      (i) eine Vorderplatte (26) mit einem ersten Finger (28a; 28b), der von einer Seite derselben nach hinten absteht, wobei die Vorderplatte zum Überspannen des Abstands zwischen den und zum Überlappen der vertikalen Drähte (20), die eine der Öffnungen entlang einer Kante des Paneels begrenzen, ausgebildet und bemessen ist, wobei der erste Finger außerhalb der Kante angeordnet ist;
      (ii) eine Rückplatte (30), die zum Überspannen des Abstands zwischen den und zum

Überlappen der horizontalen Drähte (18), welche die eine Öffnung begrenzen, ausgebildet und bemessen ist; und
(iii) Befestigungsmittel (34, 36) zum Verbinden und Zusammendrücken der Rück- und Vorderplatten (30; 36),

wobei der erste Finger (28a; 28b) in dem vertikalen Schlitz (14) aufgenommen ist, um dadurch das Paneel mit dem Ständer (12) zu verbinden, und **dadurch gekennzeichnet, dass** die Vorderplatte (26) mit dem ersten Finger (28a; 28b) an einer Seite derselben weiterhin einen zweiten nach hinten abstehenden Finger (28a; 28b) an einer gegenüberliegenden Seite derselben umfasst und dass jeder der Finger (28a, 28b) hakenförmig ist und für einen mechanischen Eingriff mit einer Unterkante des Schlitzes (14) ausgebildet ist.

2. Sicherheitstrennwandsystem (10) gemäß Anspruch 1, das weiterhin nach vom abstehende Randflansche (32) an der Rückplatte (30) umfasst, wobei die Flansche dazu angeordnet sind, mechanisch mit den horizontalen Drähten (18) in Eingriff zu stehen.

3. Sicherheitstrennwandsystem (10) gemäß Anspruch 1 oder Anspruch 2, wobei die Vorderplatte (26) der Klemme (24) zusätzlich mit einem koplanaren Seitenflansch (38) benachbart zu jedem der Finger (28a; 28b) versehen ist, wobei jeder der Seitenflansche eine Aussparung (40) hat, durch die ein Verriegelungsstift (42) in den Schlitz (14) einführbar ist, um den Finger in mechanischem Eingriff mit der Unterkante des Schlitzes zu halten.

Revendications

1. Système de cloison de sécurité (10) comprenant un assemblage de composants incluant :

a) un montant vertical (12a, 12b) ayant au moins une fente verticale (14),
b) un panneau (16) comprenant des fils horizontaux et verticaux régulièrement écartés (18, 20) délimitant des ouvertures carrées, et incluant en outre
c) un clip (24) destiné à connecter l'un ou l'autre bord latéral dudit panneau audit montant, ledit clip comprenant :

(i) une plaque avant (26) ayant un premier doigt (28a, 28b) dépassant vers l'arrière par rapport à un de ses côtés, ladite plaque avant étant configurée et dimensionnée pour enjamber et recouvrir l'espace entre les fils verticaux (20) délimitant l'une desdites ouvertures le long d'un bord dudit panneau, ledit premier doigt étant disposé à l'extérieur dudit bord,
(ii) une plaque arrière (30) configurée et dimensionnée pour enjamber et recouvrir l'espace entre les fils horizontaux (18) délimitant ladite une ouverture, et
(iii) un moyen de fixation (34, 36) destiné à connecter mutuellement et à mettre en contact lesdites plaques avant et arrière (30, 36) et,

ledit premier doigt (28a, 28b) étant reçu dans ladite fente verticale (14) pour connecter de cette manière ledit panneau audit montant (12) et **caractérisé en ce que** ladite plaque avant (26) avec ledit premier doigt (28a, 28b) sur un de ses côtés comprend en outre un deuxième doigt dépassant vers l'arrière (28a, 28b) au niveau d'un côté opposé de celle-ci et **en ce que** chacun desdits doigts (28a, 28b) est en forme de crochet et est configuré pour un engagement mécanique avec un bord inférieur de ladite fente (14).

2. Système de cloison de sécurité (10) selon la revendication 1, comprenant en outre des rebords périphériques dépassant vers l'avant (32) sur ladite plaque arrière (30), lesdits rebords étant conçus pour engager mécaniquement lesdits fils horizontaux (18).

3. Système de cloison de sécurité (10) selon la revendication 1 ou la revendication 2, dans lequel ladite plaque avant (26) dudit clip (24) est de plus dotée d'un rebord latéral coplanaire (38) adjacent à chacun desdits doigts (28a, 28b), chacun desdits rebords latéraux ayant une ouverture (40) à travers laquelle une goupille de verrouillage (42) peut être insérée dans ladite fente (14) pour maintenir ledit doigt en engagement mécanique avec le bord inférieur de ladite fente.

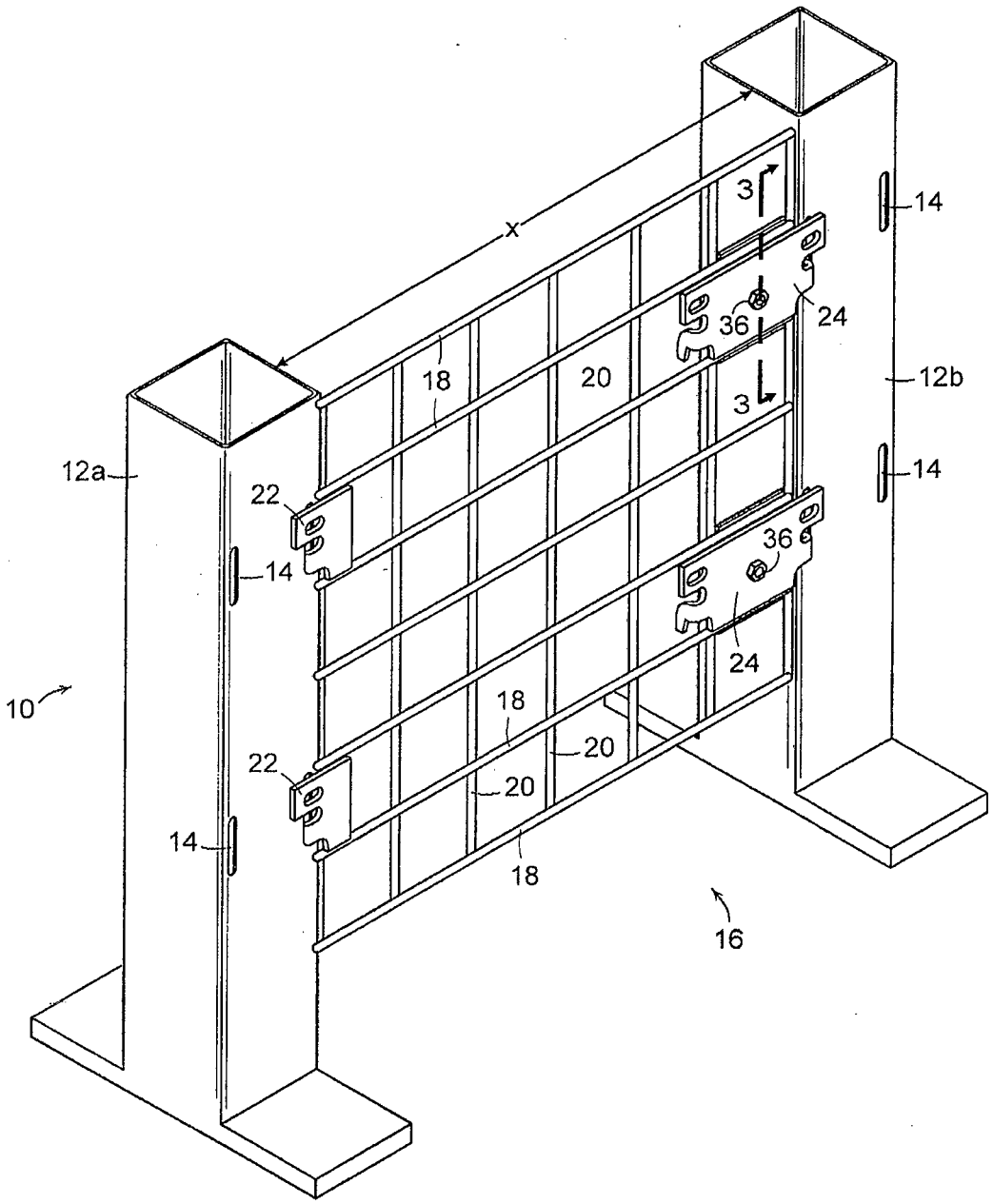

FIG. 1

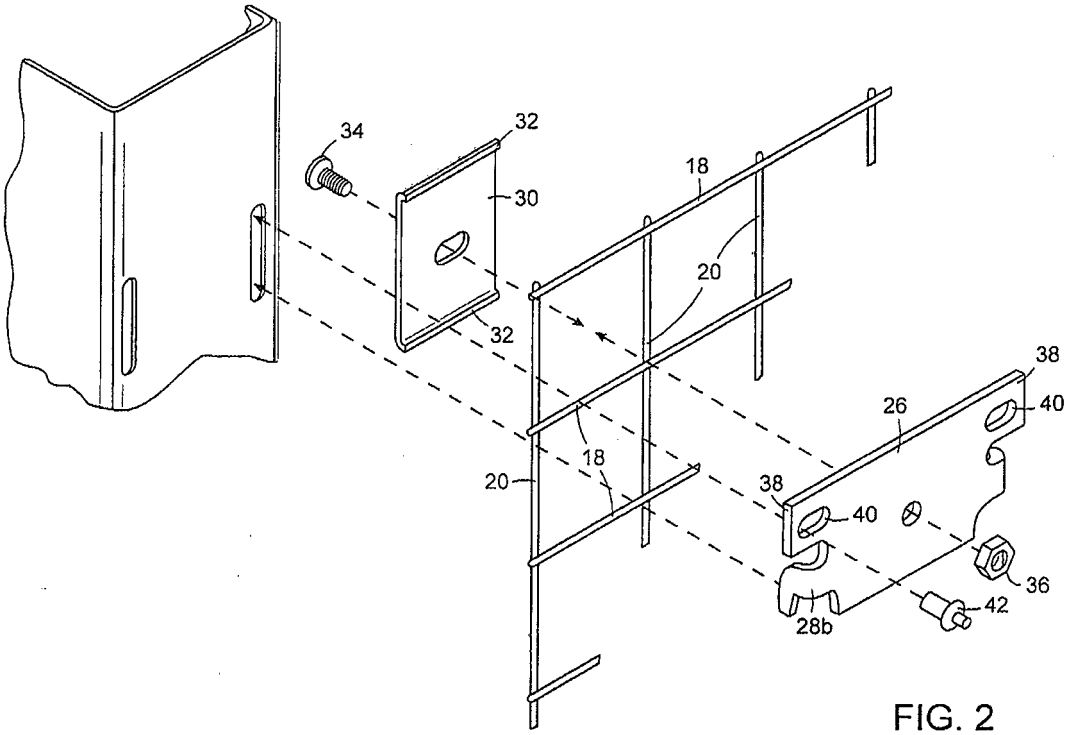

FIG. 2

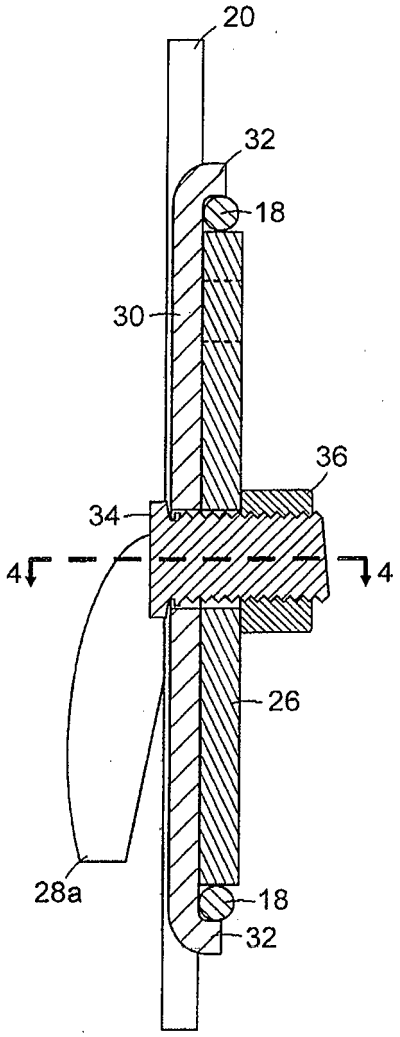

FIG. 3

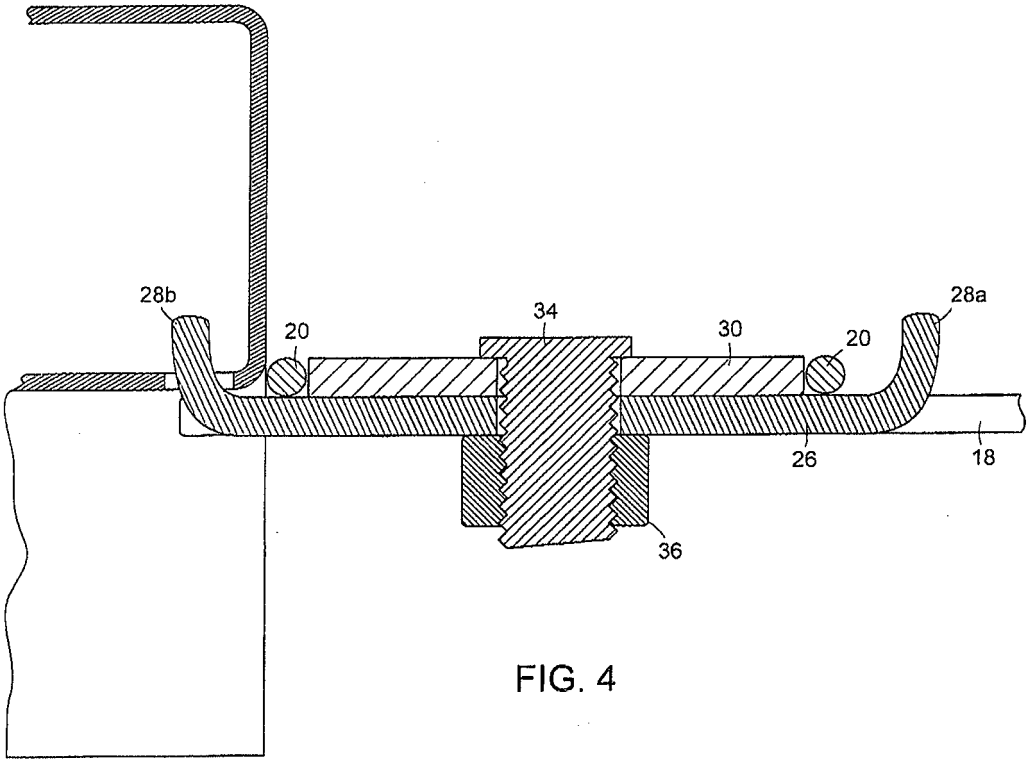

FIG. 4

REFERENCES CITED IN THE DESCRIPTION

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