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(54) **A SIGN SYSTEM AND A SUPPORT FOR SIGNS**

ANZEIGESYSTEM UND ANZEIGETRÄGER

SYSTEME DE PANNEAUX VISUELS ET SUPPORT CORRESPONDANT

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(56) References cited:
FR-A- 727 588 **US-A- 4 973 212**
US-A- 5 212 898

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Description

This invention concerns a sign system of the type defined in the introductory portion of claim 1, and a support for signs defined in the introductory portion of claim 5.

A known example of such sign systems or supports for signs is a system comprising a support and a plurality of elastically flexible sign elements, wherein the support is provided with U-shaped holding means spaced from each other in such a manner that the legs of the U-shaped profile substantially face each other. It is hereby possible to insert a plane, elastically flexible sign element by inserting two opposed sides of the sign element into their respective U-profiles. In this known device, the distance between the two opposed U-profiles is of such a size that the sign element, when mounted in the U-profiles, is caused to assume a bowed shape, since the sign element is elastically flexible, and since the U-shaped holding means have a distance which is smaller than the distance between the two opposed edges of the sign element.

These known sign systems are frequently used in connection with relatively small signs, and where the sign elements are relatively rigid to ensure that the sign element does not easily slip in the U-shaped profiles, which may occur in particular if the U-shaped profiles extend in a vertical direction. Further, in connection with this known type of sign systems it is difficult to mount the sign elements, because, particularly in case of large formats, it is necessary to simultaneously insert the entire length of the two opposed edges which are to be inserted into the U-shaped profile. If this is not done, the edges of the signs moreover tend to be damaged when the edge of the sign element is subsequently pressed into the U-profiles.

US Patent No. 5 212 898 discloses a sign system, where signs may be mounted on a curved plate. The sign has holes which cooperate with holding means on the plate. The holding means are formed by a bolt part and a locking ring and are adapted to secure the sign. The holding means are provided in vertical as well as horizontal rows. Since the sign is to be placed on the curved plate, the positions of the holes with respect to the holding means on the plate are to satisfy rather strict tolerance requirements, since the plate must necessarily have a curvature which exactly corresponds to the curvature on the curved plate.

This known sign systems have rather complicated holding means to secure the sign. It is noted in this connection that holding means are also provided to secure the sign at the centre of the upper and lower edges of the sign.

The object of the present invention is to provide an improved sign system and a sign support which enable simple mounting of signs on a support without strict requirements with respect to the distance between the rows of holding means. This is achieved by the sign sys-

tem as defined in claim 1 or by using the support for signs as defined in claim 5.

Since the sign support of the invention is provided with holding means on the support which comprise two vertical separate rows of snap locks spaced from each other in each row, it is ensured that these supports may be provided with plane, elastically flexible sign elements, as stated in claim 1, which are provided with holding means which are complementary to the holding means provided on the support and which comprise punched holes. This means that, in the mounting, individual ones of the snap locks on the support may be inserted into the punched holes of the sign element until the mounting of the sign has been completed. In addition, the snap locks ensure fixation of the mounted sign element in all directions and cause the sign element to assume a bowed shape, which may even be allowed to have a varying curvature which solely depends on the distance between the rows of holes.

Claim 2 defines a sign system which is adapted to the distance between two opposed edges on standard paper formats, thereby ensuring that it is extremely simple to produce signs for the sign system using ordinary standard paper formats.

It is stated in claim 3 that the mutual distances between the snap locks in each row correspond to the distance between punching means in a hole puncher for filing use, thereby ensuring that the individual signs are simple to file.

When the dimension of the sign element corresponds to an A3, A4 or A5 format, it is extremely simple to produce signs in a standard photocopying machine or printer.

It is stated in claim 6 that the snap locks have an external dimension which is slightly greater than the diameter of the punching means in a standard hole puncher, thereby making it possible to use such a puncher for punching filing holes.

Claim 7 defines expedient embodiments of the structure of a support for the signs.

Claim 8 defines an embodiment of a snap lock which enables mounting of holding pins on standard profiles or the like, making it simple to build specially designed signs.

Embodiments of the invention will be described more fully below with reference to the drawings, in which:

fig. 1 shows an upright support according to the invention provided with sign elements,

fig. 2 is a top view of the support of fig. 1, with sign elements on both sides,

fig. 3 shows a support according to the invention with a poster-sized sign,

fig. 4 shows an embodiment of a snap lock for use

in the invention.

Thus, fig. 1 shows an upright sign support 1 having a base 2 and two vertically extending profiles 3 and 4, each of which is downwardly secured to the base 2, and which are upwardly connected with a transverse profile 5 so as to form a frame structure with two parallel, vertically extending side profiles 3 and 4. The profiles 3 and 4 are centrally stiffened by means of a plate 6. Along part of their length the vertically extending profiles 3 and 4 are provided with a row of snap locks 7 and 8 on which sign elements 9 and 10 are mounted, said sign elements being provided with punched holes along the edges 11 and 12 of the sign elements.

As will be seen in fig. 2, which is an enlarged top view of the sign shown in fig. 1, the snap locks 7 and 8 on the sign 1 are positioned such that the sign elements 10 when mounted on the snap locks 7 and 8 are caused to assume a bowed shape, thereby obtaining a desired depth effect of the plane sign element 10. It is shown here how the support 1 may be provided with sign elements 10 on both sides, and it is moreover illustrated how a source of light 13 may be located between the sign elements 10 to provide illumination of the sign elements from behind, if these should be fully or partly translucent. The bowed shape of the sign elements hereby ensure that the source of light is suitably spaced from the sign elements 10 so as to provide a relatively even distribution of light across the sign elements 10.

Figs. 1 and 2 show formats of the sign elements which substantially correspond to the common A4 format, but the idea of the invention is not restricted to this and may be used in connection with any type of formats.

Fig. 3 thus shows a sign support 14 having a base 15 on which a sign element 16 of a relatively large format is mounted. It is shown here that the holding pins do not have to extend along the entire edges 17 and 18 of the sign element 16, it being merely necessary to have a plurality of snap locks which can suitably hold the sign element 16 in a smoothly bowed shape.

However, the distance between the individual snap locks may expediently have such a size as makes it possible to punch the holes in the sign element 16 shown in fig. 3 or the sign elements 10 and 11 shown in figs. 1 and 2 in a simple manner using a standard hole puncher for filing use.

It will thus be seen in fig. 3 that the sign element 16 is formed with punched holes at its corners, provided by means of a hole puncher for filing use which is widely used in e.g. Denmark.

In view of the described idea of the invention, it is clear that a skilled person can teach many different embodiments of a sign system and a sign support which provide the same advantages as are achieved in connection with the use of the present invention. Thus, the snap locks may be formed in many different ways and may e.g. be formed as a turned or moulded rotationally symmetrical pin, as shown in fig. 2, or e.g. as a pin bent

in wire or formed of sheet material. Further, the pins may be secured to the sign support in many different known ways e.g. by welding or screwing, or in that the snap locks are formed as an integral unit with the support.

The support may also be constructed as a lattice or frame structure established by joining standard profiles on which the snap locks 7 and 8 may be provided in the ways stated above.

Fig. 4 shows an embodiment of a snap lock 7, said snap lock 7 being provided with outer threads 19 to be screwed into inner threads 20 in the associated holding ring 21, by means of which the snap lock may be mounted on a standard profile.

The shown embodiments illustrate sign supports capable of standing by themselves, but the idea of the invention may equally well be applied in connection with sign supports to be hung on a wall or the like. In addition, the sign support may be formed such that the sign element, after mounting on the sign support, is given a bowed shape around a horizontal or vertical direction, or any given angle between these. The sign support may moreover be formed such that one and the same sign support allows several different orientations of the sign elements, e.g. in upright size or oblong size.

Claims

1. A sign system comprising a support and a plurality of plane, elastically flexible sign elements, said support being provided with holding means positioned at a first distance from each other, said holding means being adapted to engage complementary holding means at the two lateral opposed edges of the sign elements, said first distance between the holding means on the support being smaller than the distance between the complementary holding means on the sign elements so that the sign elements, after mounting on the support, is caused to assume a bowed shape, wherein the holding means on the support are formed by two vertical separate rows of snap locks, said snap locks in each row being positioned at a second distance from each other, said holding means on the sign elements comprising punched holes having a dimension slightly smaller than that of the snap locks.
2. A sign system according to claim 1, **characterized** in that the second distance between the two separate rows of snap locks is adapted to the distance between two opposed edges on a standard paper format, and that the dimension of the sign element corresponds to the same standard paper format.
3. A sign system according to claim 1 or 2, **characterized** in that the second distances between the snap locks in each row correspond to the distance between punching means in a standard hole puncher

for filing use.

4. A sign system according to claims 2 and 3, **characterized** in that the dimension of the sign element corresponds to an A3, A4 or A5 format.
5. A support for signs, said support being provided with holding means adapted to engage a plurality of plane, flexible sign elements as defined in any one of the preceding claims, said holding means being positioned at a distance from each other and adapted to engage complementary holding means at opposed edges of the sign element, **characterized** in that the holding means on the support comprise two vertical separate rows of snap locks, said snap locks in each row being positioned at a distance from each other.
6. A support according to any of the preceding claims, **characterized** in that the snap locks have an outer dimension which is slightly larger than the diameter of the punching means in a standard hole puncher.
7. A support according to any of the preceding claims, **characterized** by being constructed as a lattice or frame structure comprising rods on which the snap locks are formed or mounted.
8. A support according to claims 5-7, **characterized** in that the snap lock is formed with means for releasable mounting of the snap lock on the support.

Patentansprüche

1. Schildersystem mit einer Stützeinrichtung mit mehreren ebenen, elastisch flexiblen Schilderelementen, wobei die Stützeinrichtung mit Halteeinrichtungen versehen ist, die in einem ersten gegenseitigen Abstand angeordnet sind, wobei die Halteeinrichtungen zum Zusammengreifen mit komplementären Halteeinrichtungen an den beiden gegenüberliegenden Seitenrändern ausgebildet sind, und wobei der erste Abstand zwischen den Halteeinrichtungen der Stützeinrichtung geringer ist als der Abstand zwischen den komplementären Halteeinrichtungen der Schilderelemente, so daß die Schilderelemente nach dem Anbringen an der Stützeinrichtung eine gekrümmte Form aufweisen, wobei die Halteeinrichtungen an der Stützeinrichtung durch zwei separate vertikale Reihen von Schnappriegeln gebildet sind, wobei die Schnappriegel in jeder Reihe in einem zweiten gegenseitigen Abstand angeordnet sind, und wobei die Halteeinrichtungen der Schilderelemente Stanzlöcher aufweisen, deren Abmessungen geringfügig kleiner als diejenigen der Schnappriegel ist.

2. Schildersystem nach Anspruch 1, dadurch gekennzeichnet, daß der zweite Abstand zwischen den beiden separaten Reihen von Schnappriegeln an den Abstand zwischen zwei gegenüberliegenden Rändern eines Standard-Papierformats angepaßt ist, und daß die Abmessungen des Schilderelements dem selben Standard-Papierformat entsprechen.

3. Schildersystem nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der zweite Abstand zwischen den Schnappriegeln in jeder Reihe dem Abstand zwischen den Stanzeinrichtungen eines standardmäßigen Lochers für Büro Zwecke entspricht.

4. Schildersystem nach den Ansprüchen 2 und 3, dadurch gekennzeichnet, daß die Abmessungen des Schilderelements dem Format A3, A4 oder A5 entsprechen.

5. Stützeinrichtung für Schilder, wobei die Stützeinrichtung mit Halteeinrichtungen zum Zusammengreifen mit mehreren ebenen, flexiblen Schilderelementen nach einem der vorhergehenden Ansprüche versehen ist, wobei die Halteeinrichtungen mit gegenseitigem Abstand angeordnet sind und zum Zusammengreifen mit komplementären Halteeinrichtungen an gegenüberliegenden Rändern des Schilderelements ausgebildet sind, dadurch gekennzeichnet, daß die Halteeinrichtungen an der Stützeinrichtung zwei separate vertikale Reihen von Schnappriegeln aufweisen, wobei die Schnappriegel in jeder Reihe in einem gegenseitigen Abstand angeordnet sind.

6. Stützeinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Schnappriegel eine Außenabmessung aufweisen, die geringfügig größer als der Durchmesser der Stanzeinrichtungen eines standardmäßigen Lochers ist.

7. Stützeinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß sie als eine Gitter- oder Rahmenstruktur mit Stäben ausgebildet ist, an denen die Schnappriegel ausgebildet oder angebracht sind.

8. Stützeinrichtung nach den Ansprüchen 5-7, dadurch gekennzeichnet, daß die Schnappriegel mit Einrichtungen zum lösaren Befestigen des Schnappriegels an der Stützeinrichtung ausgebildet sind.

Revendications

1. Système d'affichage de pancartes comprenant un

support et une pluralité de pancartes planes, flexibles élastiquement, ledit support étant doté de moyens de fixation positionnés à une première distance les uns des autres, lesdits moyens de fixation étant adaptés à engager des moyens de fixation complémentaires aux deux bords latéraux opposés des pancartes, ladite première distance entre les moyens de fixation sur le support étant inférieure à la distance entre les moyens de fixation complémentaires sur les pancartes de manière que les pancartes, après montage sur le support, adoptent une forme courbe, les moyens de fixation sur le support étant formés par deux rangées verticales séparées de plots d'encliquetage, lesdits plots d'encliquetage dans chaque rangée étant positionnés à une seconde distance les uns des autres, lesdits moyens de fixation sur les pancartes comprenant des trous perforés ayant une dimension légèrement inférieure à celle des plots d'encliquetage.

2. Système d'affichage de pancartes selon la revendication 1, caractérisé en ce que la seconde distance entre les deux rangées séparées de plots d'encliquetage est adaptée à la distance entre deux bords opposés sur un format de papier standard, et en ce que la dimension de la pancarte correspond audit format de papier standard.

3. Système d'affichage de pancartes selon la revendication 1 ou 2, caractérisé en ce que les secondes distances entre les plots d'encliquetage dans chaque rangée correspondent à la distance entre des moyens de perforation dans un perforateur standard utilisé à des fins de classement.

4. Système d'affichage de pancartes selon les revendications 2 et 3, caractérisé en ce que la dimension de la pancarte correspond à un format A3, A4, ou A5.

5. Support pour pancartes, ledit support étant doté de moyens de fixation adaptés à engager une pluralité de pancartes planes, flexibles, telles que définies selon l'une quelconque des revendications précédentes, lesdits moyens de fixation étant positionnés à une distance les uns des autres et adaptés à engager des moyens de fixation complémentaires aux bords opposés de la pancarte, caractérisé en ce que les moyens de fixation sur le support comprennent deux rangées verticales séparées de plots d'encliquetage, lesdits plots d'encliquetage dans chaque rangée étant positionnés à une distance les uns des autres.

6. Support selon l'une quelconque des revendications précédentes, caractérisé en ce que les plots d'encliquetage ont une dimension externe qui est légèrement supérieure au diamètre des moyens de per-

foration d'un perforateur standard.

7. Support selon l'une quelconque des revendications précédentes, caractérisé en ce qu'il est construit comme une structure à grilles ou à cadres comprenant des barres sur lesquelles les plots d'encliquetage sont formés ou montés.

8. Support selon les revendications 5 à 7, caractérisé en ce que le plot d'encliquetage est doté d'un moyen pour monter avec possibilité d'enlèvement le plot d'encliquetage sur le support.

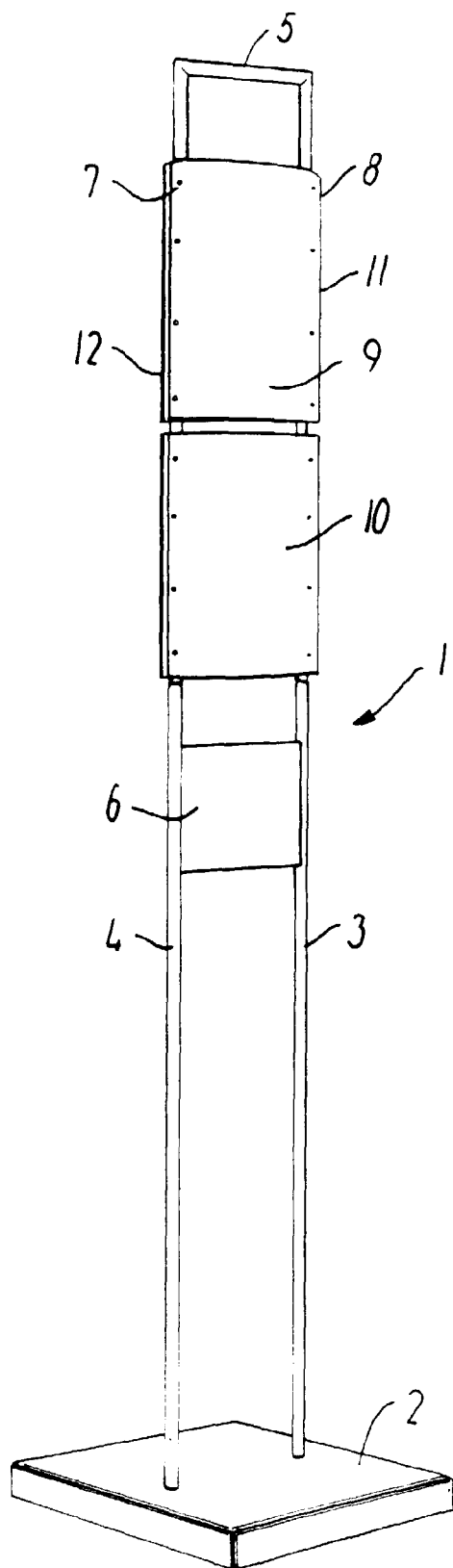


FIG. 1

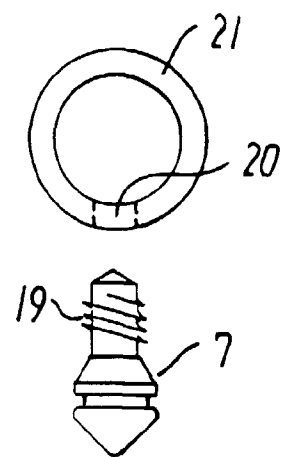


FIG. 4

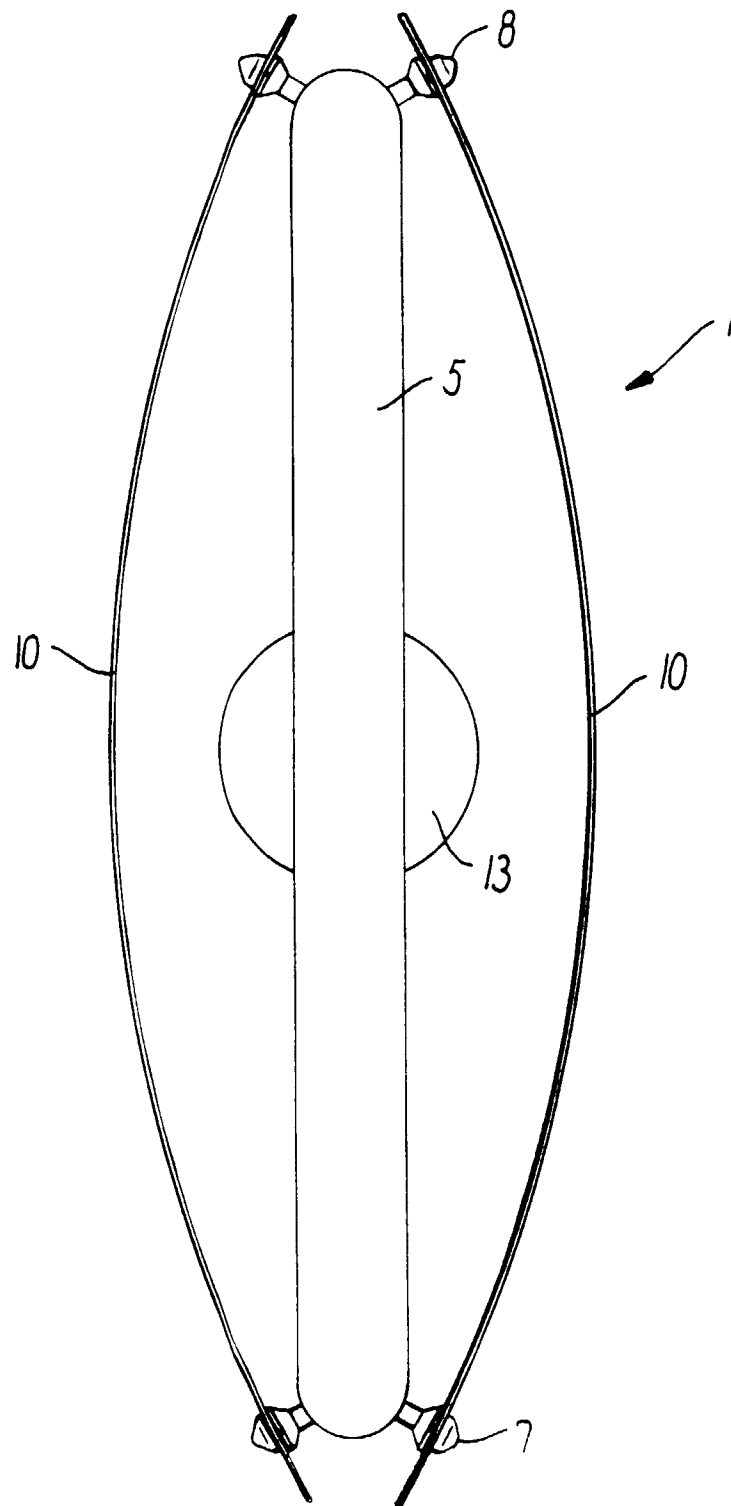


FIG. 2

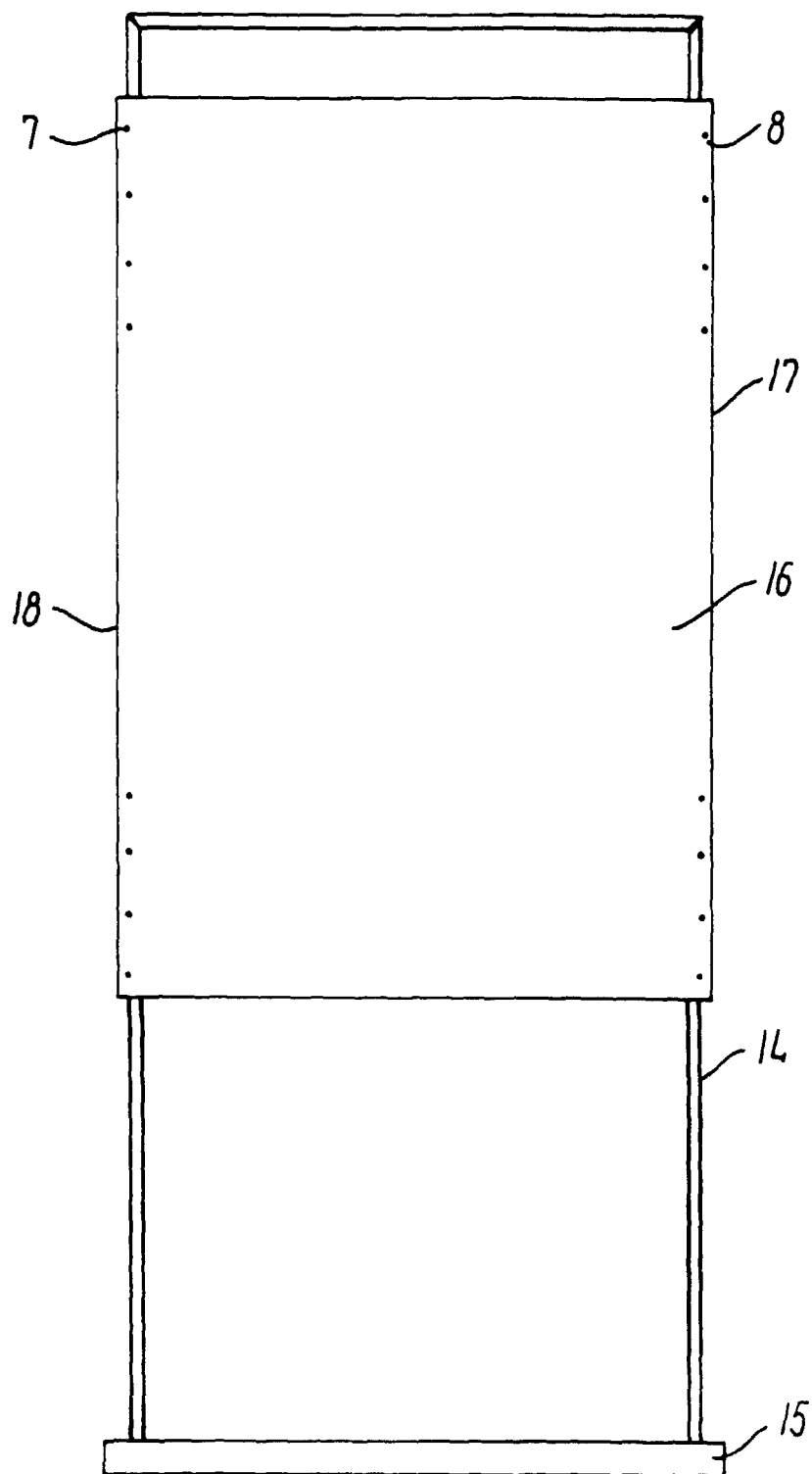


FIG. 3