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(54) **Arrangement at poster cabinet**

Anordnung für Plakatkasten

Dispositif pour panneau d'affichage

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Description

[0001] The present invention relates a cabinet containing two paper posters facing in opposite directions and illuminated from behind, wherein the poster cabinet comprises two flat, transparent cabinet sides and two translucent layers, between which the lighting is situated, and wherein such a large interspace is formed between the lower part of the cabinet side and the translucent layer that the posters can be attached and loaded in this interspace.

[0002] Such cabinets have been common for a long time. They are either free-standing, in which case they usually stand on a base, or they take the form of a gable end in bus and tram shelters. The posters are usually Eurosize, ie they are about 120 centimetres wide and about 180 centimetres high. The sides of the cabinets usually have a sheet of hardened glass. In the cabinets there are a number of fluorescent tubes and between each poster and the fluorescent tubes there is an opaque acrylic plastic sheet, for example three millimetres thick. This sheet is fixed at its edges. The sheet is limp, and the force required to make it bulge is insignificant. Different heating, for example due to solar radiation on dark and light parts of the poster, may cause the sheet to bulge since its coefficient of longitudinal expansion is great. The surface of the sheet will therefore not be reliably parallel to the glass in the side of the cabinet.

[0003] In practice it has been found that poster paper which has become damp or wet swells, so that creases appear in the paper. The depth of these creases can often be as much as ten millimetres, since the acrylic can, apart from at its edges, bulge so that there is space for these creases. In addition it is common for there to be a certain gap between the glass and the acrylic sheet even when the sheet is completely flat. The creases can be very ugly and greatly devalue an advertising message.

[0004] The purpose of the invention is to prevent the poster paper from creasing and to allow quick and simple changing of posters. A further purpose is to make poster changing in high winds easier. A further purpose is that there should be no need to manually remove or load a poster at a great height above the ground.

[0005] The invention has the particular characteristics that are stated in the claims.

[0006] An embodiment of the invention will be described below with the aid of diagrams.

[0007] Figure 1 shows a poster cabinet viewed from the side, in section.

Figure 2 shows the cabinet according to Figure 1, viewed on section A-A.

[0008] In the diagrams certain dimensions have been exaggerated for reasons of clarity and parts that are not relevant to the invention have been omitted. The number 1 refers to the fixed part of the cabinet, which may be fixed to a base or fitted to a frame in a bus shelter. The fixed part of the cabinet may be made of L-

shaped aluminium extrusions assembled to form a frame consisting of an upper part, a lower part and two side parts. A sheet of hardened glass is mounted in the frame.

[0009] The other side of the cabinet can be opened. It also consists of L-shaped extrusions. Here, the upper extrusion is numbered 3, the lower 4 and the two side extrusions 5 and 6. These are assembled to form a frame in which the sheet of glass 7 is mounted. The cabinet side is articulated at the top on hinge 8 so that its lower part can be swung out/up from the fixed part of the cabinet.

[0010] In GB-A-2 290 901 is disclosed e.g. a light box for a bus shelter. The light box comprises two opposite directed display surfaces for advertisement, which both are movable and which are supported by a frame, wherein a light source is provided within the frame, and further cladding is applied to the support frame to define an exterior surface of the light box.

[0011] A frame generally numbered 9 consists of an upper part 10 curved at the top and a lower part 11 and between these, three rods 12. Four fluorescent tubes 13 are mounted between the upper part and the lower part. The frame is rotatably articulated around journals 14 in lugs 15, which are fixed to side extrusions 5 and 6. Fabric straps 16 limit the movement of the frame relative to the opening cabinet side. An opaque polyester film 0.25 millimetres thick, 1220 millimetres wide and 3800 millimetres long is attached at its short end at the lower part 11 and placed over the curved upper part 10 and attached at its other short side to lower part 11. The polyester film thus forms two translucent layers 17 and 18. There must be an arrangement, not shown on the diagram, for firmly tensioning the film so that it is taut. On either side of the frame there are at the top two pulleys 19 and 20 and at the bottom two pulleys 21 and 22, one of which, 22, is a toothed belt pulley. The two toothed belt pulleys are fixed to a common shaft. A crank 23 is also fixed to this shaft. A toothed belt 24 runs over the four pulleys on each side. Three strips 25, 26 and 27 are attached at their ends to the upper sides of the toothed belts. On each strip close to its ends there is a small attaching arrangement 28 in which the poster paper can be gripped. Small pins can then penetrate the paper.

[0012] The number 29 refers to a cassette in which a cardboard bobbin 30 can rotate. Posters 31 are rolled up on the cardboard bobbin. On the upper side of the cassette there are two arms 32 which can be placed on pins 33 on extrusion 4. The cassette has a soft rubber strip 34 which, because of the weight of the cassette, seals against the lower extrusion 4 of the cabinet side. At the bottom the cassette has an opening gap 35 through which posters can emerge. The bobbin with posters can be inserted through one side panel of the cassette. The bobbin can be excluded, in which case the cassette contains only rolled-up posters.

[0013] Figure 1 shows a poster 36, the four corners

of which are attached to the strips 25 and 26. The second poster 37 of the cabinet is attached by its top two corners to the third strip 27. In the diagram, the major part of this poster is still inside the cassette.

[0014] The procedure for changing the message is: first the side of the cabinet is swung up and hooked in the raised position. Gas springs may be used to balance the weight of the cabinet side. These, and the hooking arrangement, are not shown as they do not affect the invention. The lowest part of the frame 9 moves away from the side of the cabinet on account of its weight and the position of bearing 14. Because of the fabric straps 16 the frame opens by a predetermined amount. The cassette 29 with rolled-up posters is suspended on the lowest part of the cabinet side owing to the fact that the cassette arms 32 engage pins 33. The rubber inner edge 34 of the cassette then presses weakly against the lower edge of the cabinet side and water, as in the case of rain, runs down on to the rubber strip and then to the sides.

[0015] The two old posters can be removed by hand simply by pulling them out. In addition to the new posters the cassette can also have a roller, for example a cardboard bobbin, on which the old posters can be rolled up. When the old posters have been removed, the first strip 25 should be above the layer 17, close to its lower edge.

[0016] The outer poster in the cassette is pulled out a short way and its two corners are attached to the two attaching arrangements 28 of the strip, after which the crank is turned, and the strip 25 then moves along the layer 17 and the poster is unrolled from the cassette. When the strip has got close to the upper part of the layer, the entire poster has come out of the cassette. The two corners of the poster that have now come out are attached to the attaching arrangements of the second strip 26. On continued cranking, the first strip 25 moves close over the bent polyester film at the upper end of the frame and the third strip 27 comes out over the first layer 17 close to its bottom part. The second poster 37 is pulled out with its upper part first and the corners of the poster are attached to the attaching arrangements of the strip. The crank is then turned so much that the upper part of this poster comes close to the upper end of the layer adjacent to the upper part of the frame. The lower part of the poster has now come out from the cassette. There may possibly be a fourth strip to which the bottom corners of this poster can be attached. After this the cassette is removed and the side of the cabinet is swung down. The lower part of the frame 9 then comes close to the cabinet side and the two translucent layers 17 and 18. The cabinet side is locked at the fixed part of the cabinet and the change is complete.

[0017] Instead of the cassette for each cabinet having two loose posters, they may, before being placed in the cassette, have been glued together with an intermediate paper so that they are about 20 centimetres from each other. The two posters with the glued-on intermediate

paper thus form one length and it may then be enough to attach the first poster at the first strip 25. The second strip 26 and the third strip 27 are then unnecessary. Such a procedure facilitates the change at the cabinet by requires additional work beforehand, although this can be done indoors. It may be possible to print the advertising messages on a length of paper about 3.8 metres long.

[0018] Instead of having the two translucent layers arranged as in the diagrams, they may take the form of an endless plastic belt and at each end of the frame there may be a roll with a diameter of, for example, 12 centimetres or two rolls with a smaller diameter so that the distance between the layers becomes 12 centimetres. By, for example, using adhesive tape to attach the lower and upper corners of the first poster to the plastic belt and the upper corners of the second poster to this and then cranking so that the belt moves, the posters can be correctly positioned. Instead of adhesive tape, there may be attaching arrangements of another kind fixed to the plastic belt.

[0019] Naturally there must be an arrangement for holding the translucent layers stretched between the ends of the frame, by means of springs for example.

[0020] A benefit from the arrangement according to the invention is that changing of the two posters can be done quickly and simply. Because of the cassette and the fact that the poster cannot get wet when installed during rain, the formation of creases when doing this is avoided.

[0021] Because the poster goes directly from the cassette to the feed arrangement close under the cabinet side, the poster is not affected by strong wind.

[0022] Because operations for removing and loading the posters can be done at a convenient height above the ground, the change is made easier.

[0023] Because the translucent layers are thin and can be kept under tension, they remain taut and flat and the poster can maintain a distance from the glass of the side of the cabinet, thus avoiding contact with it. When condensation forms on the cooled glass surface, it is hard to avoid condensation being deposited on the inside of the glass as well. It is important that the poster does not come into contact with it then.

Claims

1. A poster cabinet, containing two paper posters facing in opposite directions and illuminated from behind (36, 37), wherein the poster cabinet comprises two flat, transparent cabinet sides (2, 7) and two translucent layers (17, 18), between which the lighting (13) is situated, each poster (36, 37) being provided between an adjacent cabinet side (2, 7) and an adjacent translucent layer (17, 18); and wherein such a large interspace is formed between the lower part (4) of the cabinet side (7) and the translucent

layer (17) that the posters (36, 37) can be attached and loaded into this interspace wherein

- a first cabinet side (2) is fixed whilst a second one (7) is pivotingly articulated in the upper part (8) of the cabinet so that its lowest part can be swung outwards/upwards from the lower part of the cabinet,
- the translucent layers (17, 18) are fixed to a frame (9) which is pivoted so that its lowest part can be swung outward/upward from the lower part of the cabinet when the second cabinet side (7) is open,
- the frame (9) is connected to the second cabinet side (7), so that when the second cabinet side (7) is raised, the frame (9) pivots upwards so that the interspace for attaching and loading the posters (36, 37) is formed between the lower part (4) of the second cabinet side (7) and the translucent layer (17), and
- a loading arrangement (24, 25, 26, 27, 28) is provided for the posters, pivoted in the lower part of the frame (9).

2. A poster cabinet according to claim 1, **characterised in that** the frame (9) is rotatably pivoted in the second cabinet side (7).

3. A poster cabinet according to one of the above claims, **characterised in that** the two translucent layers (17, 18) are fixed and that the loading arrangement (24, 25, 26, 27, 28) can be moved closely outside them.

4. A poster cabinet according to claim 3, **characterised in that** the loading arrangement consists of two endless belts (24) or chains between which there are strips (25, 26, 27) carrying attaching arrangements (28).

5. A poster cabinet according to claim 4, **characterised in that**, for the poster (36) that is loaded with its bottom edge first, there is an attachment arrangement (26) where its top edge can be attached.

6. A poster cabinet according to one of the above claims, **characterised in that** the two translucent layers (17, 18) consist of an endless belt carried on rollers in the frame (9), where the posters (36, 37) can be attached to the belt and this can be moved by rotating a roller in the lower part of the frame (9) so that the posters (36, 37) take up the correct position.

7. A poster cabinet according to one of the above claims, **characterised in that** a cassette (29) containing rolled-up posters (31) can be removably attached to the lowest part of the second cabinet side

(7) so that posters (36, 37) can be loaded without getting wet.

Patentansprüche

1. Plakatvitrine mit beidseitiger Werbefläche für zwei hinterleuchtete Papierplakate (36,37), wobei die Plakatvitrine zwei gerade, durchsichtige Fronten (2,7) und zwei durchleuchtbare Schichten (17,18) hat, zwischen denen die Beleuchtung (13) angeordnet ist, wobei jedes Plakat (36,37) zwischen einer angrenzenden Front (2,7) und einer angrenzenden durchleuchtbaren Schicht (17,18) sitzt und wobei ein so großer Zwischenraum zwischen dem unteren Teil (4) der Tür (7) und der durchleuchtbaren Schicht (17) entsteht, dass die Plakate (36,37) darin befestigt und hochgezogen werden können, in welcher

- eine erste Vitrinenfront (2) fest ist, während eine zweite im oberen Teil (8) der Vitrine schwenkbar gelagert ist, so dass sich deren unterer Teil vom unteren Teil der Vitrine aus nach außen/oben schwenken lässt,
- die durchleuchtbaren Schichten (17,18) in einem schwenkbaren Rahmen (9) befestigt sind, so dass dessen unterer Teil vom unteren Teil der Vitrine aus nach außen/oben geschwenkt werden kann, wenn die Tür offen ist,
- der Rahmen (9) mit der Tür (7) verbunden ist, so dass der Rahmen (9) nach oben schwenkt, wenn die Tür (7) geöffnet ist und so der Zwischenraum zum Befestigen und Hochziehen der Plakate (36,37) zwischen dem unteren Teil (4) der Tür (7) und der durchleuchtbaren Schicht (17) entsteht und
- eine Hochziehvorrichtung (24,25,26,27,28) für die Plakate im unteren Teil des Rahmens (9) gelagert ist.

2. Eine Plakatvitrine nach Anspruch 1, **dadurch gekennzeichnet, dass** der Rahmen (9) in der Tür (7) schwenkbar gelagert ist.

3. Plakatvitrine nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die durchleuchtbaren Schichten (17,18) fest sind und dass sich die Hochziehvorrichtung (24,25,26,27,28) außen und dicht daran vorbeibewegen kann.

4. Plakatvitrine nach Anspruch 3, **dadurch gekennzeichnet, dass** die Hochziehvorrichtung aus zwei endlosen Riemen (24) oder Ketten besteht, zwischen welchen Leisten (25,26,27) mit Befestigungsvorrichtungen (28) sitzen.

5. Plakatvitrine nach Anspruch 4, **dadurch gekennzeichnet,**

zeichnet, dass es für das Plakat (36), das zuerst mit seiner unteren Kante eingeführt wird, eine Befestigungsvorrichtung (26) gibt, an der seine obere Kante befestigt werden kann.

6. Plakatvitrine nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die beiden durchleuchtbaren Schichten (17,18) aus einem endlosen Band bestehen, das im Rahmen (9) auf Walzen gelagert ist, wobei die Plakate (36,37) auf dem Band befestigt werden können und dieses durch die Rotation einer Walze am unteren Teil des Rahmens bewegt werden kann, so dass die Plakate an den richtigen Platz kommen.

7. Plakatvitrine nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** eine Kasette (29), die aufgerollte Plakate (31) enthält, abnehmbar am unteren Teil der Tür (7) befestigt werden kann, so dass die Plakate (36,37) hochgezogen werden können, ohne dabei nass zu werden.

Revendications

1. Vitrine d'affichage contenant deux affiches de papier tournées en sens inverse et éclairées par derrière (36, 37) où la vitrine d'affichage contient deux faces de vitrine planes et transparentes (2, 7) et deux couches translucides (17, 18) entre lesquelles l'éclairage (13) est arrangé, où chaque affiche (36, 37) se trouve entre une face de vitrine adjacente (2, 7) et une couche translucide adjacente (17, 18); et où il y a un si grand espace entre la partie inférieure (4) de la face de la vitrine (7) et la couche translucide (17) que les affiches (36, 37) peuvent être attachées et montées dans cet espace dans lequel

- une première face de la vitrine (2) est fixe pendant qu'une autre face est pivotée dans la partie supérieure (8) de la vitrine de manière que sa partie inférieure peut être tournée en dehors/en haut de la partie inférieure de la vitrine
- les couches translucides (17, 18) sont fixées dans un cadre (9) qui est tournant en dehors/en haut de la partie inférieure de la vitrine quand l'autre face de la vitrine est ouverte
- le cadre (9) est attaché à l'autre face de la vitrine (7) de manière que le cadre (9), quand l'autre face de la vitrine (7) est ouverte, est tourné en haut et et forme l'espace pour attacher et monter les affiches (36, 37) entre la partie inférieure (4) de l'autre face de la vitrine (7) et la couche translucide (17) et
- il y a un dispositif de montage (24, 25, 26, 27, 28) dans la partie inférieure du cadre (9).

2. Vitrine d'affichage selon Revendication 1 **caracté-**

risée en ce qu le cadre (9) est pivotée contre l'autre face de la vitrine (7).

3. Vitrine d'affichage selon une des revendications ci-dessus, **caractérisée en ce que** les deux couches translucides (17, 18) sont fixes et que le dispositif de montage (24, 25, 26, 27, 28) peut se déplacer tout près au-dessus d'elles.

4. Vitrine d'affichage selon Revendication 3, **caractérisée en ce que** le dispositif de montage consiste en deux courroies sans fin (24) ou des chaînes entre lesquelles il y a des lattes (25, 26, 27) qui portent des dispositifs de fixation (28).

5. Vitrine d'affichage selon Revendication 4, **caractérisée en ce que**, pour l'affiche qui est introduite par son bord inférieur d'abord, il y a un dispositif de fixation (26) où son bord supérieur peut être fixé.

6. Vitrine d'affichage selon une des revendications de brevet ci-dessus **caractérisée en ce que** les deux couches translucides (17, 18) consistent en une courroie sans fin transportée par des cylindres dans le cadre (9) où les feuilles d'affiches (36, 37) peuvent être fixées à la courroie et celle-ci, par la rotation d'un cylindre à la partie inférieure du cadre peut être tournée de manière que les affiches soient correctement placées.

7. Vitrine d'affichage selon une des revendications ci-dessus, **caractérisée en ce qu'une** cassette (29) contenant des affiches roulées (31) peut être attachée, détachable, à la partie inférieure de l'autre face de la vitrine (7) de manière que les affiches (36, 37) puissent être montées sans être mouillées.

