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(54) **ADVERTISING SIGN**

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Description

[0001] This invention relates to profiles for use in an advertising sign and an advertising sign as such where the desired message is applied to a relatively thin, flexible and, if desired, translucent canopy of reinforced or conventional plastic, fabric, or the like, which is stretched and fastened with a certain degree of tension onto a box-like structure in such manner that it remains completely straight and does not move substantially with wind pressure, etc. In the box-like apparatus there may be mounted sources of light in the form of fluorescent tubes, or the like, to enable the printed message to be visible in the dark also.

[0002] Many different structures have been used for this purpose, and we can refer in this regard to U.S. patents no. 4,542,605, 4,430,819, 4,452,000, 1,867,756, 3,722,119, 2,212,313 and DK laid-open application no. 161,861. These all have the common feature that the canopy, on which the desired message has been applied, forms the front and/or the side, of a box-like structure, and the canopy is securely fastened at the top and bottom and, if desired, on the sides in profiles or the like. These profiles are held at the correct distance from one another by struts or braces therebetween, or by tightening devices, and the entire front may be tilted out and upward with the aid of hinges, etc., when it is necessary to change the sources of light, or the like. Previously one used transparent panels, but for reasons of efficiency canopies are now used most often.

[0003] The described advertising signs may frequently be several meters long; and it is thus clearly both difficult and strenuous to replace the fluorescent tubes, or the like, in these advertising signs because the entire length of the surface containing the message must be swung out and upward simultaneously, with the aid of hinges, etc., and be held in the upward-swung position by, e.g., stakes while the replacement of the fluorescent tube takes place. Another disadvantage of the described structures is that the struts necessary to hold the fastening profiles for the canopy in the correct spaced relationship will cast shadows on the canopy even if said struts are made as narrow as possible.

[0004] In addition to this, it is evident that in both production and use such advertising signs must be very demanding in terms of resources. Indeed, one can easily imagine how difficult it will be to open an advertising sign of a length of 10 meters to replace a fluorescent tube.

[0005] The drawbacks mentioned above do not exist with the invention according to the claims and several major advantages have been achieved in comparison with the previously described structures.

[0006] The invention relates to an advertising sign of the type as of claim 1 and to profiles for use in an advertising sign, of the types as described in the pre-characterizing parts of claims 6 and 8.

[0007] An advertising sign of the above mentioned type is known from US-A-4,265,039, which discloses an

advertising sign comprising a rigid framework or cabinet comprising a fluorescent lamp. A stretchable fabric carrying decorations is placed at the display face. The sign is provided with a profile mounted on frame struts of the cabinet and comprising a hinge pin, which is provided with stop means in the shape of abutment parts. A tightening member, viz. a wedge, holds a side of the fabric, when in abutment with the mouth of the hinge pin. The hinge pin is swingable in a direction away from the front and toward the sides of the cabinet with a view to fastening and tightening the canopy. When the maximum tension is applied, the lever of the hinge pin is abutting against a member of the cabinet's framework, where it is securely locked in position using a keeper.

[0008] EP 0 387 030 relates to a sign assembly of another type, viz. using for the tensioning of the canopy a shifting motion only of a tightening member in a profile. Anyhow, a series of shoulders are provided at this profile corresponding to several stop positions for the tightening member for use in the tensioning of the canopy.

[0009] Still further, EP 0 387 030 discloses a profile for use in an advertising sign of a generally U-shaped section and comprising a rounded outer edge for the easy slid of a canopy.

[0010] The structure of the apparatus in accordance with the invention is much lighter and simpler, despite the fact that one attains at least an equal degree of a rigidity in the apparatus here, compared with the previous structures. To this are added the advantages that, firstly, it is very easy to mount the canopy correctly so that the message on the sign is not ruined by variations in height and in lateral direction. Considerable precision is required particularly when the message contains a straight line, which is often the case. Secondly, the invention greatly facilitates the necessary tightening of the canopy to ensure that it does not move substantially even when exposed to the heaviest gusts of wind; and, in addition, it makes it possible to withstand much greater tolerances in the length and width of the canopy. But the greatest advantage is attained when the light sources, e.g., in the form of fluorescent tubes, are to be replaced. Then, it is necessary merely to release the fastening device at the bottom and on the sides and to allow the canopy to hang straight down, because no heavy parts are attached to the canopy, and one then attains free access to the lighting tubes at the same time as the structure permits the resting of ladders directly against the structure at the top or the bottom. It is then a simple matter to reattach the canopy and to get it to hang exactly straight. All this may be accomplished by one person, regardless of the particular length of the advertising sign, as opposed to the previously mentioned signs where three men would certainly be necessary for a 10-meter-long sign.

[0011] Last, but not least, this invention provides several advantages pertaining to the structure itself. The struts which form and maintain the box shape may be made in various standard heights and depths, but are

otherwise identical; and the longitudinal parts may be made in standard lengths. Also, in this invention there are no parts situated between the light sources and the canopy, and therefore no shadows are cast on the canopy, either.

[0012] The invention is illustrated on the accompanying drawing where Figure 1 shows an overall sectional view of a conventional type advertising sign in a simple embodiment form. Figure 2 shows a preferred embodiment form of the invention, and here only the top and outermost part of the advertising sign is shown. Figure 3 shows a lock fitting for the tightening member, viewed from above, and Figure 4 shows in section a second embodiment of the invention, also where only the top and outermost part of the apparatus is illustrated.

[0013] The drawing in Figure 1 further shows the box-shaped advertising sign having front 2, top side 3, underside 4 and rear side 5. The front 2 may also face downward or upward, or the advertising sign 1 may have a message for several sides, on the ends, etc., but in the interest of simplicity only the aforementioned designations are used both in the specification, patent claims and abstract. On the drawing in Figure 1 are also struts 6, which must be so strong that they do not substantially "give" or bend when the canopy 7 is mounted on apparatus 1. On the front 2, at the top and the bottom between the struts there are affixed rectangular tubes 8, or the like, which brace the structure laterally and form a base for the cover panels 9 for the apparatus 1. Inside the apparatus, e.g., on a rear panel 10, is mounted a fluorescent light/tube 11, or the like.

[0014] The flexible and translucent canopy 7 is mounted at the front edge of apparatus 1. Canopy 7 is brought over the outside edge 12 of panel 9. The edge 12 is bent in an angle inclining upward/downward and inward 13, and its outermost edge is bent inward and back in order for canopy 7 to have a round edge over which to slide. The outermost edge of canopy 7 is inserted down between tightening member 16 and the upward bent portion 15 thereof, with the actual bend-edge 17 bearing against cover panel 9. A short distance from bend 17, the upward bent portion 15 is bent outward and back again 18 to form a rounded edge for canopy 7, which is secured between the mentioned parts by their being either pressed together or held together with the aid of screws, pins, glue or the like. Tightening member 16 is then placed in approximately perpendicular position inside edge 14 with its bend 17 against cover panel 9. When tightening member 16 is then swung in the direction toward the rear side 5 and inward toward sides 3,4, canopy 7 is tightened, and the tightening member can then be fastened to the cover panel 9, e.g., with the aid of pins, screws, or the like. In principle, such conventional advertising sign is known from US-A-4,265,039. To protect against water penetration and impact, covers 23 may be mounted over the tightening members 16, as shown, and secured with screws, pins, or the like 24, and the screws on the tightening members

16 may then be omitted. In the interest of easy mounting and dismounting, the tightening members 16 may be made relatively short. When the apparatus is to be opened, e.g., to replace the fluorescent tube, one is able, e.g., simply to open it at the bottom and let the canopy hang loose while the work is done.

[0015] On the drawing, Figure 2, on the front edge of apparatus 1, at the top, bottom, and on the ends of the struts 6 are attached profiles 25, and on these profiles are formed longitudinal means 37 in which may be placed aluminum strips to ensure that the abutting profiles are brought into precise alignment. Outermost toward front 2 is a rounded edge over which canopy 7 may easily be slid. Within the profiles 25 having a bottom 26, on the side closest to front 2, are situated a plurality of longitudinal tracks 27 over one another, with their openings facing inward in profiles 25. The top wall 28 over the uppermost track 27 is shorter than partition wall 28 between the two top tracks 27; and partition wall 28' extends farther out than partition wall 28'. On the opposite side of profile 25 are a plurality of longitudinal grooves 29 opening inward in profile 25 and having bevelled edges 30 outermost on the underside of each groove 29.

[0016] The tightening members 16 and the attachment of canopy 7 thereto are, here, exactly the same as what is described for Figure 1, except that here there is a bent-over edge 31 serving as a stiffener for tightening member 16. When canopy 7 is attached to tightening member 16, the latter is set down in an upright position, as shown on the drawing, so that the bend 17 bears against partition wall 28', 28" or the bottom 26, depending on which of the tracks 27 one chooses to use. Then tightening member 16 is swung inward from front 2 and toward the bottom 26 of profile 25. When the tightening of canopy 7 has been completed, tightening members 16 may be locked by means of a lock fitting 32, which one then inserts into an appropriate groove 29 while grasping the upward bent part 33. See Figure 2. Lock fitting 32 is pressed all the way into groove 29 until the upper section 31 of tightening member 16 springs up outside the downward bent flaps 34 and effectively locks tightening member 16. One may easily regulate the desired degree of tautness for the tightening members by choosing to use different tracks/grooves 27 and 29.

[0017] The principle of this structure may also be applied as shown in Figure 4. Here, the tightening members 16 and the fastening of canopy 7 thereto are precisely the same as are shown in Figure 2, except that the tightening members 16 are bent 35 at the lower end thereof. Profile 25 has, on the top side 3 and underside 4 of apparatus 1, channels 36 opening, respectively, upward and downward along the entire profile 25. The side edges of channels 36 incline toward the rear side 5 of apparatus 1. In mounting the tightening members 16 with canopy 7, the bent portion 35 of tightening member 16 is inserted down into an appropriate channel 36, and the upper part of tightening member 16 is then swung away from the front 2 and toward the upper side 3 or

underside

[0018] The profiles 25 are also beneficial in the respect that they are very rigid, thus preventing the forces imparted by the canopy 7, when being tightened, from causing any substantial downward bending of the profiles 25.

Claims

1. An advertising sign comprising a rigid apparatus (1), preferably having sources of light (11) mounted therein, and on a visible front (2) thereof a relatively thin and flexible canopy (7) comprising at least one peripheral side edge, a desired message having been applied onto said canopy; and a profile (25) mounted on frame struts (6) of the apparatus (1), said profile being provided with stop means for one or more tightening members (16) holding one or more of said side edges of the canopy (7), said tightening members in abutment against the stop means (27) of the profile being swingable around said abutment point in the direction away from the front (2) and toward sides (3, 4) of the apparatus (1) with a view to fastening and tightening the canopy (7), and said tightening members (16) being secured to the profile by locking means, wherein the stop means of the profile (25) comprises more than one track (27) with a view to establishing alternative points of rotation for the tightening member (16) during the swinging thereof.
2. An advertising sign according to claim 1, **characterized in that** the profile (25) comprises an upper (or lower) part of generally U-shaped section, the stop means being provided at the bottom wall thereof and comprising more than one longitudinal channels (36) aligned in parallel with a side wall of the profile (25).
3. An advertising sign according to claim 1, **characterized in that** the locking means of the profile comprises more than one locking grooves (29).
4. An advertising sign according to claim 3, **characterized in that** the profile (25) has a generally U-shaped section, the two side walls of which being provided with more than one inwardly protruding stop partition walls (28, 28', 28'') and more than one inwardly protruding locking partition walls (30), respectively, defining said tracks (27) and said grooves (29), respectively, intended for cooperation with the tightening member (16) in the tightening and securing of the canopy (7).
5. An advertising sign according to claim 4, **characterized in that** it comprises a lock fitting (32) for insertion into one of the grooves (29) with a view to

securely hold the tightening member (16) in place.

6. A profile (25) of a generally U-shaped section for use in an advertising sign, comprising a rounded outer edge for the easy slid of a canopy (7), **characterized in that** the two side walls are provided with more than one inwardly protruding stop (28, 28', 28'') and locking (30) partition walls, respectively, defining tracks (27) and grooves (29), respectively, intended for cooperation with a tightening member (16) in the tightening and securing of the canopy (7).
7. A profile according to claim 6, **characterized in that** the stop partition walls (28, 28', 28''), in the direction towards the bottom wall (26) of the U-shaped profile, are protruding progressively further into the profile.
8. A profile (25) for use in an advertising sign, comprising a rounded outer edge for the easy slid of a canopy (7), the profile (25) comprising an upper or lower part of generally U-shaped section, the bottom wall thereof being provided with more than one longitudinal channels (36) aligned in parallel with a side wall of the profile (25), said channels (36) being intended for cooperation with a tightening member (16) in the tightening of the canopy (7), **characterized in that** it further comprises external longitudinal means (37), preferably at a front side, intended for the reception of aluminum strips with a view to ensuring the precise alignment of abutting profiles.
9. A profile according to claim 8, **characterized in that** partition walls between the channels (36) in the profile (25) incline inwards toward a rear wall of the profile (25).
10. A profile according to any one of the claims 6 or 7, **characterized in that** it further comprises external longitudinal means (37), preferably at a front side, intended for the reception of aluminum strips with a view to ensuring the precise alignment of abutting profiles.

Patentansprüche

1. Werbeanzeige mit einer starren Vorrichtung (1) vorzugsweise mit darin eingesetzten Lichtquellen (11) und an einer sichtbaren Vorderseite (2) mit einer relativ dünnen und flexiblen Abdeckung (7) mit wenigstens einem peripheren Seitenrand, wobei eine gewünschte Aussage auf dieser Abdeckung angebracht ist, und einem an Rahmenstreben (6) der Vorrichtung (1) angebrachten Profil (25), welches mit Arretierungen für ein oder mehrere Spannelement(e) (16) versehen ist, das bzw. die eine oder

mehrere der Seitenkanten der Abdeckung (7) hält bzw. halten, und die Spannelemente bei Anlage an der Arretierung (27) des Profils um den Anlagepunkt in Richtung weg von der Vorderseite (2) und in Richtung auf die Seiten (3, 4) der Vorrichtung (1) schwenkbar sind, um die Abdeckung zu befestigen und zu spannen, und die Spannelemente (16) an dem Profil durch Verriegelungsmittel verankert sind und das Arretiermittel des Profils mehr als eine Führung (27) aufweist, um alternative Rotationspunkte für die Spannelemente (16) während des Verschwenkens derselben einzurichten.

2. Werbeanzeige nach Anspruch 1, **dadurch gekennzeichnet, dass** das Profil (25) ein oberes (oder unteres) Teil von im allgemeinen U-förmigen Querschnitt aufweist und das Arretiermittel an dessen Bodenwand angebracht ist und mehr als einen zur Seitenwand des Profils (25) parallelen Längskanal (36) aufweist.

3. Werbeanzeige nach Anspruch 1, **dadurch gekennzeichnet, dass** das Verriegelungsmittel des Profils mehr als eine Verriegelungsnut (29) aufweist.

4. Werbeanzeige nach Anspruch 3, **dadurch gekennzeichnet, dass** das Profil (25) einen im wesentlichen U-förmigen Querschnitt hat und dessen zwei Seitenwände mit mehr als einer einwärts vorstehenden Arretier-Trennwand (28, 28', 28") bzw. mehr als einer einwärts vorstehenden Verriegelungs-Trennwand (30) versehen sind, die die Führungen (27) bzw. Nuten (29) definieren, die zum Zusammenwirken mit dem Spannelement (16) beim Spannen und Sichern der Abdeckung (7) bestimmt sind.

5. Werbeanzeige nach Anspruch 4, **dadurch gekennzeichnet, dass** sie ein Verriegelungsteil (32) zum Einfügen in eine der Nuten aufweist, um das Spannelement sicher in seiner Lage zu halten.

6. Profil mit im wesentlichen U-förmigem Querschnitt zur Verwendung in einer Werbeanzeige mit einer abgerundeten äußeren Kante für das leichte Gleiten einer Abdeckung (7), **dadurch gekennzeichnet, dass** zwei Seitenwände mit mehr als einer einwärts vorstehenden Halte- (28, 28', 28") bzw. Schließ-(30)-Trennwand versehen sind, um Führungen (27) bzw. (29) zu definieren, die zum Zusammenwirken mit einem Spannelement (16) beim Spannen und Sichern der Abdeckung (7) bestimmt sind.

7. Profil nach Anspruch 6, **dadurch gekennzeichnet, dass** die Halte-Trennwände (28, 28', 28") in Richtung auf die Bodenwand (26) des U-förmigen Profils zunehmend weiter in das Profil vorstehend ausge-

bildet sind.

8. Profil (25) zur Verwendung bei einer Werbeanzeige mit einer abgerundeten Außenkante für das leichte Gleiten einer Abdeckung (7), wobei das Profil (25) ein oberes oder unteres Teil von im wesentlichen U-förmigem Querschnitt aufweist, dessen Bodenwand mit mehr als einem Längskanal (36) versehen ist, der parallel zur Seitenwand des Profils (25) verläuft, und die Kanäle (36) zum Zusammenwirken mit einem Spannelement (16) zum Spannen der Abdeckung (7) bestimmt sind, **dadurch gekennzeichnet, dass** es außerdem äußere längsverlaufende Mittel (37), vorzugsweise an einer Vorderseite, aufweist, die zur Aufnahme von Aluminiumstreifen dienen, um die genaue Ausrichtung von benachbarten Profilen zu gewährleisten.

9. Profil nach Anspruch 8, **dadurch gekennzeichnet, dass** sich die Trennwände zwischen den Kanälen (36) im Profil (25) nach innen gegen eine rückwärtige Seitenwand des Profils (25) neigen.

10. Profil nach einem der Ansprüche 6 oder 7, **dadurch gekennzeichnet, dass** es außerdem äußere längsverlaufende Mittel (37), vorzugsweise an einer Vorderseite, aufweist, die zur Aufnahme von Aluminiumstreifen dienen, um die genaue Ausrichtung von benachbarten Profilen zu gewährleisten.

Revendications

1. Enseigne publicitaire comprenant un dispositif rigide (1), ayant de préférence des sources de lumière (11) montées à l'intérieur, et, sur sa face visible (2), une coupole (7) relativement mince et flexible, comprenant au moins un bord latéral périphérique, un message souhaité ayant été appliqué sur ladite coupole; et un profilé (25) monté sur des étais de cadre (6) du dispositif (1), ledit profilé étant pourvu de moyens de butée pour un ou plusieurs organes de serrage (16) maintenant un ou plusieurs desdits bords latéraux de la coupole (7), lesdits organes de serrage étant en butée contre les moyens de butée (27) du profile, pouvant osciller autour dudit point de butée dans la direction s'éloignant de la face (2) et allant vers les côtés (3, 4) du dispositif (1), en vue de fixer et de serrer la coupole (7), et lesdits organes de serrage (16) étant fixés au profilé par des moyens de verrouillage, dans laquelle les moyens de butée du profilé (25) comprennent plus d'une piste (27) en vue d'établir des points alternés de rotation pour l'organe de serrage (16), durant son oscillation.

2. Enseigne publicitaire selon la revendication 1, **caractérisée en ce que** le profilé (25) comprend une

- partie supérieure (ou inférieure) de section globalement en forme de U, les moyens de butée étant prévus sur sa paroi inférieure et comprenant plus d'un canal longitudinal (36) aligné parallèlement avec une paroi latérale du profilé (25).
3. Enseigne publicitaire selon la revendication 1, **caractérisée en ce que** les moyens de verrouillage du profilé comprennent plus d'une gorge de verrouillage (29).
4. Enseigne publicitaire selon la revendication 3, **caractérisée en ce que** le profilé (25) présente une section globalement en forme de U, dont les deux parois latérales sont pourvues de plus d'une paroi de séparation de butée (28, 28', 28") faisant saillie vers l'intérieur et de plus d'une paroi de séparation de verrouillage (30) faisant saillie vers l'intérieur, respectivement, définissant lesdites pistes (27) et lesdites gorges (29), respectivement, destinées à coopérer avec l'organe de serrage (16) prévu pour le serrage et la fixation de la coupole (7).
5. Enseigne publicitaire selon la revendication 4, **caractérisée en ce qu'elle** comprend un raccord de verrouillage (32) à insérer dans l'une des gorges (29), en vue de maintenir rigidement en place l'organe de serrage (16).
6. Profilé (25) de section globalement en forme de U, à utiliser dans une enseigne publicitaire, comprenant un bord extérieur arrondi pour faciliter le coulisement d'une coupole (7), **caractérisé en ce que** les deux parois latérales sont pourvues de plus d'une paroi de séparation de butée (28, 28', 28") et de verrouillage (30), faisant saillie vers l'intérieur, respectivement, définissant les pistes (27) et les gorges (29), respectivement, destinées à coopérer avec un organe de serrage (16) dans le serrage et la fixation de la coupole (7).
7. Profilé selon la revendication 6, **caractérisé en ce que** les parois de séparation de butée (28, 28', 28") dans la direction allant vers la paroi inférieure (28) du profilé en forme de U font saillie progressivement plus loin dans le profilé.
8. Profilé (25) à utiliser dans une enseigne publicitaire, comprenant un bord extérieur arrondi pour faciliter le coulisement d'une coupole (7), le profilé (25) comprenant une partie supérieure ou inférieure de section globalement en forme de U, sa paroi inférieure étant pourvue de plus d'un canal longitudinal (36) aligné parallèlement avec une paroi latérale du profilé (25), lesdits canaux (36) étant destinés à coopérer avec un organe de serrage (16) dans le serrage de la coupole (7), **caractérisé en ce qu'il** comprend en outre des moyens longitudinaux (37)
- extérieurs, de préférence d'un côté avant, destinés à recevoir des bandes en aluminium en vue d'assurer l'alignement précis des profilés en butée.
9. Profilé selon la revendication 8, **caractérisé en ce que** les parois de séparation prévues entre les canaux (36) du profilé (25) s'inclinent vers l'intérieur, en direction d'une paroi latérale arrière du profilé (25).
10. Profilé selon l'une quelconque des revendications 6 ou 7, **caractérisé en ce qu'il** comprend en outre des moyens longitudinaux (37) extérieurs, de préférence d'un côté avant, destinés à recevoir des bandes en aluminium en vue d'assurer l'alignement précis des profilés en butée.

Fig. 1



