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(54) **DISPLAY DEVICE**
ANZEIGEVORRICHTUNG
SYSTEME D'AFFICHAGE

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Description

TECHNICAL FIELD

[0001] The present invention relates to a display device, and in particular, to a rotating display device, particularly suitable for, but not limited to, a rotating menu board for use in a fast food restaurant.

BACKGROUND OF THE INVENTION

[0002] Menu boards used in fast food outlets are typically positioned at more than two meters above ground level, usually behind and/or above the serving counter, or, in a driveway - for a drive-through service. The difficulty encountered with utilising such menu boards is that they are difficult and cumbersome to change, due to their size and position.

[0003] Also, in some fast food outlets, two or more menus are often utilised throughout the day, for instance, at breakfast or at lunch and/or dinner. With such prior art menu boards, fast food outlets with two or more menus typically show both their menus throughout the entire day. This causes delays, confusion and misordering by customers, when looking at the wrong menu.

[0004] Various rotating menuboard have herebefore been designed, to overcome these problems, such as described in Australian Patent No. 640211 by Florida Plastics Midwest, Inc. AU 640211 describes a rotatable display sign which has a circular-like member 56 (Fig. 7) with a plurality of recessed portions around the circumference thereof. A plurality of rigid panel portions 34 which are interconnected on their longitudinal edges by hinge-like means. The hinge-like means 40,41 engage the recessed portions 58 such that, when a handle 62 is manually operated, the drum like member 56, via a gearing arrangement 55, facilitates movement of the display sign panels 34.

[0005] As will be appreciated, the device of AU 640211 is quite difficult to manufacture due to its vast number of components, is cumbersome to operate due to the necessity to turn handle 62 - which may typically be positioned some two metres above ground level, and is prone to breakage - due to its complex design and incorporation of many moving parts.

[0006] The present invention seeks to provide a display device which overcomes the disadvantages of the prior art.

[0007] The present invention also seeks to provide a display device which enables the alternative positioning of a display means between, a viewing position, and one or more storage position(s), such that, different displays can be provided at different predetermined times throughout the day, etc.

[0008] United States Patent Specification No. US-A-4 110.925 discloses a display device having rollers (26 and 27), about which a chain is driven by a motor. A carrier is driven between the rollers (26 and 27), the car-

rier being positioned by additional rollers (28) such that the display is viewed through window 17, being backlit by lights (23).

[0009] German Patent Specification No. DE-A-3 901 053 discloses a display roller (9 and 11) driven by a motor M (15) such that one of a plurality of displays contained on a carrier (8) may be provided into position for viewing through a window (3), being backlit by lights (12).

[0010] In one broad form, the present invention provides a display device, including:

at least two rotatable roller members located in substantially parallel spaced apart relationship;
a carrier means, embodied as a belt, band or the like, and, formed of a lightweight polycarbonate or like plastics material being tightly supported by and rotatable about said rollers and/or onto at least two of said roller members, in a spool-like manner, and, adapted to receive at least one display means thereon, each of said carrier means and said display means being constructed at least partially of substantially flexible and translucent material;
each display means embodied as translite(s) (as herein defined) and/or slat(s) being sized and shaped to fit between a pair of adjacent rollers such that one or more discrete rest position(s) is automatically identified after said display device is rotated, whereby, in said rest position(s), one of said display means is centrally positioned between a respective pair of rollers; and,
illumination means, provided behind at least a portion of said carrier means, to illuminate a viewing portion of said carrier means and said display means thereon.

[0011] In a preferred form said translite(s) is/are attached to said carrier by a substantially transparent/translucent adhesive material.

[0012] In an alternatively preferred form of the invention said translite(s) is/are attached to said carrier by a covering sheet provided over substantially the entirety of said carrier, such that each translite is positioned between said carrier and said covering sheet.

[0013] In an alternatively preferred form said translite(s) is/are attached to said carrier by a hook and loop fastening system, such as Velcro.

[0014] Preferably, each said slat(s) is attached to said carrier by slat carrier means.

[0015] Preferably, each said slat carrier means has a lip thereon to support an edge of a respective slat.

[0016] Preferably, each slat may optionally be provided with at least one window portion therein, and wherein an indicia module may be provided behind said window.

[0017] In a preferred form each indicia module comprises:

at least one substantially translucent carrier to re-

movably house an indicia card;
at least one attachment means to attach said indicia module to said slat carrier means.

[0018] Preferably, said attachment means comprises at least one protrusion on the edge of each module, adapted to be retained by said slat carrier means.

[0019] In a preferred embodiment the display device further comprises drive means, to drive at least one of said roller members and to thereby selectively move at least one display means between a viewing position and a storage position(s).

[0020] In one version, said drive means continuously moves said carrier means.

[0021] In a further broad form, the present invention provides an alternative version said drive means is operated intermittently, to move one of at least two display means to said viewing position, one at a time.

[0022] Preferably, the indicia module for use with a display device having slat carriers or the like, includes:

a module frame, sized and shaped to fit between a pair of slat carriers; and
display window means intermediate said module frame, for selectively and removably inserting display indicia therein;

characterised in that said module is provided with at least one protrusion forming an attachment means such that resistance to sliding of said module along said slat carrier is effected.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The present invention will become more fully understood from the following detailed description of the preferred but non-limiting embodiment described in connection with the accompanying drawing, wherein:

Fig. 1 shows, in Fig. 1(a) a schematic perspective view of a preferred embodiment of the display device of the present invention, and, in Fig. 1(b), a preferred embodiment of such a display device within a housing;

Fig. 2 shows, in Figs. 2(a) to 2(f) thereof, various schematic views of alternative roller arrangements useful for the invention;

Fig. 3 shows, in Figs. 3(a) to 3(d) thereof, various details of a preferred embodiment of the invention wherein a plurality of slats, held by a suitable slat carrier means, form the display device; and,

Fig. 4 details in Figs. 4(a) to 4(c) thereof an indicia display capsule utilised with the embodiment of Fig. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0024] As shown in Fig. 1, a display device 30 comprises a pair of rotatable roller members 31 and 32 located in parallel spaced apart relationship. A carrier means 33 is mounted between the roller members 31 and 32, in a belt like manner. It may either rotate in the direction of arrow 34, the direction of arrow 35, or, in both directions 34 and 35, one at a time. Rotation of the carrier may be effected either manually, or by drive means, which is not shown in the drawings. The drive means may either drive one or both of the roller members 31 and 32 to thereby selectively move the carrier means 33. The carrier means 33 is adapted to receive at least one display means 36 in a removable manner thereon. Preferably, the embodiment depicted in the drawing will be provided with at least two display means 36 thereon, one on the "front" of the display device 30, and one on the rear of the display device 30. By operation of the drive means, the display means 36 may be selectively moved between a viewing position and a storage position. That is, the viewing position will be at the front of the display device, and the storage position will be at the rear of the display device.

[0025] Lights or other illumination means 37 are provided between the roller members 31 and 32 to illuminate the display means 36 when in the viewing position. This is achieved by constructing the carrier means 33 and the display means 36 at least partly of transparent and/or translucent material or the like, such that the light can shine therethrough.

[0026] As shown in Fig. 1(b), the display device 30 may be provided in a housing 39 - the housing 39 being intended to be provided in an overhead position behind a serving counter in a restaurant, bar, shop or the like. It will be appreciated that, by installing the device 30 in such a housing 39, the device 30 faces a person in front of the counter.

[0027] As hereinbefore mentioned, the display means is removably attached to the carrier means by any known means, for example, by a substantially transparent or translucent adhesive material such as used for window stickers, etc, or by other known means which permits easy placement and removal such as a velcro, sticky tapes, or the like. The display device may either be used to alternatively, intermittently or continuously, display two or more display means 36, by intermittently or continuously rotating the rollers 31 or 32, or, by an electric/electronic drive means, to move one of at least two display means to a viewing position, one at a time. This may, for example, be useful for displaying at least two menus, one at a time, in a fast food restaurant, whereby one menu is to be displayed during breakfast, and another menu is to be displayed during lunch or dinner at predetermined times. For example, the menus could be changed at 10.00 am when it is desired to cease displaying the breakfast menu and thereafter dis-

play the lunch menu. The display device may be operated such that the drive means causes the breakfast menu to be moved from the front to the rear of the display device such that the lunch menu is thereafter displayed.

[0028] Suitable control circuitry may be provided to automatically affect this operation, or, the drive means may be manual, or be operated by a switch, electrical component/circuitry or the like.

[0029] One of the features that makes the display device of the present invention different from the display devices of the prior art, is the material of which the display device belt 38 is fabricated. This belt, or carrier means, is, in accordance with the present invention, constructed of a substantially flexible and translucent material. That is, the carrier means or belt is preferably constructed of a plastics or other polycarbonate material such as "LEXAN". This allows the belt to stretch between the pair of rollers 31 and 32 and rotate thereabout. The use of such a material allows easy hand movement of the display device, unlike the prior art device, such as shown in Australian Patent 640211, which requires a cumbersome operation of a handle. The use of such a polycarbonate material such as LEXAN also has translucent characteristics allowing the illumination means 37 to shine therethrough. An extremely useful characteristic feature of using such a tightly provided but lightweight belt about the rollers, is that "self-alignment" is achieved, as will be described in more detail hereinafter.

[0030] As mentioned hereinbefore, either a single "translite" 36 or a plurality of slat like members may be positioned in the outline shown by reference numeral 36. The term "translite" is a term known to persons skilled in the art and is used to refer to a substrate or transparency which may have an image printed thereon or formed otherwise thereon by digital imaging. The image may be any combination of words, logos, pictures, etc. As such, when the term "translite" is used throughout this specification, it should be considered to be defined to encompass such meaning. It will be appreciated that a further "translite" or set of slat like members would also be provided on the back surface of the belt 38. Obviously, when in use as a display sign, there is no sign attached to the curve portions or end portions of the overall device, i.e. the portion about the rollers 31 and 32. Consequently, a unique effect of the invention results. That is, due to natural balancing effects, automatic alignment of the display portions occurs to 'rest positions', such that a display is either provided on the front or back surface, but does not tend to stop halfway between the front and back and about the rollers 31 or 32. This is facilitated by the combination of lightweight materials for the belt and a smooth rolling action of the rollers 31 and 32.

[0031] As mentioned hereinbefore, a single transparency can be supplied on to each of the front and back surfaces of the belt 38, such as within the dotted lines shown by reference numeral 36 in Fig. 1. A variety of

means can be utilised for attaching a single transparency, such as glues, velcros, tapes, etc.

[0032] Alternatively, a plurality of slat holders may be supplied on to the belt, such that slats may be easily inserted therein.

[0033] Such a slat arrangement is shown in Fig 3, Fig. 3(a) illustrating a front view thereof, and Fig. 3(b) illustrating an elevational view thereof. Details of a particular slat is illustrated in front view and elevational view in Figs. 3(c) and 3(d). The slats slide into the slat carriers, as will be understood, behind a lip provided along each edge of the carriers.

[0034] In Fig. 4 is shown an indicia display capsule or indicia module, useful for use with the slat arrangement of Figs. 3. Front and elevational views are shown in Figs. 4(a) and 4(b). By this unique design of the indicia display capsule, indicia may be easily inserted into the capsule as shown in Fig. 4c, and then, due to the provision of unique protruding portions 40, the capsule may be easily inserted into position and held therein between pairs of slats. Consequential sliding in or out of the slats over the capsule does not result in movement of the capsule. Such a module may be useful in display devices other than that shown in the drawings.

[0035] It will be appreciated by persons skilled in the art that numerous variations and modifications will become apparent.

[0036] For example, as it will be appreciated by persons skilled in the art, depending on the number of display message required, variations to the device, with differing numbers of rollers, can be made. Examples of such variations are shown in Fig. 2. Fig 2 shows the use of a plurality of single size rollers in Figs. 2(a), 2(b) and 2(c), the use of smaller diameter rollers - in Figs. 2(d) and 2(e) - which enable a 'longer' viewing area on the front of the display device, and, the use of rollers wherein the carrier may roll onto the rollers - in Fig. 2(f). Such an embodiment of Fig. 2(f) may be particularly useful where space constraints are defined.

Claims

1. A display device (3), including:

at least two rotatable roller members (31,32) located in substantially parallel spaced apart relationship;

a carrier means (38), embodied as a belt, band or the like, and formed of a lightweight polycarbonate or like plastics material being tightly supported by and rotatable about said rollers (31,32) and/or onto at least two of said roller members (31,32), in a spool-like manner, and adapted to receive at least one display means (36) thereon, each of said carrier means (38) and said display means (36) being constructed at least partially of substantially flexible and

translucent material;
illumination means, (37) provided behind at least a portion of said carrier means (33), to illuminate a viewing portion of said carrier means (33) and said display means (36) thereon;

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characterised in that

each display means (36) is embodied as translite(s) (36) and/or slat(s) being sized and shaped to fit between a pair of adjacent rollers (31,32) such that one or more discrete rest position (s) is automatically identified after said display device (30) is rotated, whereby, in said rest position (s), one of said display means (36) is centrally positioned between a respective pair of rollers (31,32).

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2. A display device (30) as claimed in claim 1, wherein said translite(s) (36) is/are attached to said carrier means (38) by a substantially transparent/translucent adhesive material.

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3. A display device (30) as claimed in claims 1 or 2, wherein said translite(s) (36) is/are attached to said carrier means (38) by a covering sheet provided over substantially the entirety of said carrier means (38), such that each translite (36) is positioned between said carrier means (38) and said covering sheet.

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4. A display device (30) as claimed in any one of claims 1 to 3, wherein said translite(s) (36) is/are attached to said carrier means (33) by a hook and loop fastening system, such as VelcroTM.

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5. A display device (30) as claimed in any one of claims 1 to 4, wherein each said carrier means (38) has a lip thereon to support an edge of a respective slat.

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6. A display device (30) as claimed in any one of claims 1 to 5, wherein each slat may optionally be provided with at least one window portion therein, and wherein an indicia module may be provided behind said window.

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7. A display device (30) as claimed in claim 6, wherein each indicia module includes:

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at least one substantially translucent carrier means to removably house an indicium or indicia card;
at least one attachment means to attach said indicia module to said carrier means (38) .

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8. A display device (30) as claimed in claim 7, wherein said attachment means includes at least one protrusion (40) on the edge of each module, adapted to be retained by said carrier means (38).

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9. A display device (30) as claimed in any one of claims 1 to 8, wherein the display device further includes drive means, to drive at least one of said roller members (31, 33) and to thereby selectively move at least one display means (36) between a viewing position and a storage position(s).

10. A display device (30) as claimed in any one of claims 1 to 9, wherein said drive means continuously moves said carrier means (38).

11. A display device (30) as claimed in any one of claims 1 to 9, wherein said drive means is operated intermittently, to move one of at least two display means (36) to said viewing position, one at a time.

12. A display device (30) as claimed in any one of claims 5 to 11, wherein said indicia module for use with a display device having slat carriers or the like, includes:

a module frame, sized and shaped to fit between a pair of slat carriers; and
display window means intermediate said module frame, for selectively and removably inserting display indicia therein;

characterised in that said module is provided with at least one protrusion (40) forming an attachment means such that resistance to sliding of said module along said slat carrier is effected.

Patentansprüche

1. Anzeigevorrichtung (3), umfassend:

wenigstens zwei drehbare Rollenelemente (31, 32) angeordnet in im wesentlichen parallel beabstandetem Verhältnis;

ein Trägermittel (38), ausgeführt als ein Riemen, Band oder dergleichen und gebildet aus einem leichten Polycarbonat oder ähnlichem Kunststoffmaterial, das eng durch die genannten Rollen (31, 32) und/oder auf wenigstens zwei der genannten Rollenelemente (31, 32) in einer spulenartigen Weise gehalten wird und um dieselben drehbar ist, und ausgelegt ist, um wenigstens ein Anzeigemittel (36) darauf zu erhalten, wobei jedes des genannten Trägermittels (38) und des genannten Anzeigemittels (36) wenigstens teilweise aus im wesentlichen flexiblem und durchsichtigem Material aufgebaut ist;

Beleuchtungsmittel (37) vorgesehen hinter wenigstens einem Teil des genannten Trägermit-

tels (33), um einen Ansichtsteil des genannten Trägermittels (33) und des genannten Anzeigemittels (36) darauf zu beleuchten;

dadurch gekennzeichnet, dass jedes Anzeigemittel (36) als Transparent(e) 36 und/oder Leiste(n) ausgeführt ist, das (die) Abmessungen aufweist (aufweisen) und geformt ist (sind), um zwischen ein Paar benachbarter Rollen (31, 32) zu passen, so dass eine oder mehrere getrennte Ruhepositionen automatisch identifiziert werden, nachdem die genannte Anzeigevorrichtung (30) gedreht wird, wodurch in der (den) genannten Ruheposition(en) eines der genannten Anzeigemittel (36) zentral zwischen einem jeweiligen Rollenpaar (31, 32) positioniert ist.

2. Anzeigevorrichtung (30) nach Anspruch 1, bei der das (die) genannte(n) Transparent(e) (36) an dem genannten Trägermittel (38) durch ein im wesentlichen transparentes/durchsichtiges Klebstoffmaterial befestigt wird/werden.
3. Anzeigevorrichtung (30) nach den Ansprüchen 1 oder 2, bei der das (die) genannte(n) Transparent (e) (36) an dem genannten Trägermittel (38) durch eine Abdeckbahn befestigt wird/werden, die über im wesentlichen dem gesamten Trägermittel (38) so vorgesehen ist, dass jedes Transparent (36) zwischen dem genannten Trägermittel (38) und der genannten Abdeckbahn positioniert wird.
4. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 3, bei der das (die) genannte(n) Transparent (e) an dem genannten Trägermittel (33) durch ein Haken- und Ösenbefestigungssystem so wie Velcro^(TM) befestigt wird/werden.
5. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 4, bei der auf jedem genannten Trägermittel (38) eine Lippe vorgesehen ist, um eine Kante einer jeweiligen Leiste zu halten.
6. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 5, bei der jede Leiste wahlweise mit wenigstens einem Fensterteil darin versehen werden kann, und bei der ein Indexmodul hinter dem genannten Fenster vorgesehen werden kann.

7. Anzeigevorrichtung (30) nach Anspruch 6, bei der jedes Indexmodul umfasst:

wenigstens ein im wesentlichen durchsichtiges Trägermittel zum entfernbaren Unterbringen eines Indexes oder einer Indexkarte;

wenigstens ein Befestigungsmittel zum Befestigen des genannten Indexmoduls an dem ge-

nannten Trägermittel (38).

8. Anzeigevorrichtung (30) nach Anspruch 7, bei dem das genannte Befestigungsmittel wenigstens einen Vorsprung (40) an der Kante jedes Moduls umfasst, der ausgelegt ist, um durch das genannte Trägermittel (38) gehalten zu werden.
9. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 8, wobei die Anzeigevorrichtung weiter Antriebsmittel umfasst, um wenigstens eines der genannten Rollenelemente (31, 33) anzutreiben und dadurch selektiv wenigstens ein Anzeigemittel (36) zwischen einer Betrachtungsposition und einer Lagerposition(en) zu bewegen.
10. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 9, bei der das genannte Antriebsmittel kontinuierlich das genannte Trägermittel (38) bewegt.
11. Anzeigevorrichtung (30) nach einem der Ansprüche 1 bis 9, bei der das genannte Antriebsmittel intermittierend betrieben wird, um jeweils eines von wenigstens zwei Anzeigemitteln (36) in die genannte Betrachtungsposition zu bewegen.
12. Anzeigevorrichtung (30) nach einem der Ansprüche 5 bis 11, bei der das genannte Indexmodul zur Verwendung mit einer Anzeigevorrichtung mit Leistenträgern oder dergleichen umfasst:

einen Modulrahmen, der Abmessungen aufweist und geformt ist, um zwischen ein Paar von Leistenträgern zu passen; und

Anzeigefenstermittel zwischen dem genannten Modulrahmen, um selektiv und entfernbar Anzeigeindizes darin einzufügen;

dadurch gekennzeichnet, dass das genannte Modul mit wenigstens einem Vorsprung (40) versehen ist, der ein Befestigungsmittel bildet, so dass Widerstand gegen Verschiebung des genannten Moduls entlang des genannten Leistenträgers bewirkt wird.

Revendications

1. Dispositif d'affichage (3), comprenant :

au moins deux éléments rouleaux rotatifs (31, 32) qui sont espacés l'un de l'autre selon un rapport essentiellement parallèle ;
un moyen porteur (38), exécuté sous forme de courroie, de bande ou similaire, et réalisé en polycarbonate léger ou matière plastique similaire, et soutenu de façon tendue par lesdits

rouleaux (31, 32) et capable de tourner autour de ceux-ci, et/ou sur au moins deux desdits rouleaux (31, 32), d'une manière similaire à une bobine, et adapté pour y recevoir au moins un moyen d'affichage (36), ledit moyen porteur (38) et ledit moyen d'affichage (36) étant tous deux construits, au moins partiellement, en une matière essentiellement flexible et translucide ; un moyen d'éclairage (37) qui est prévu derrière une partie au moins dudit moyen porteur (33) afin d'éclairer une section de visualisation dudit moyen porteur (33) et dudit moyen d'affichage (36) sur celui-ci ;

caractérisé en ce que

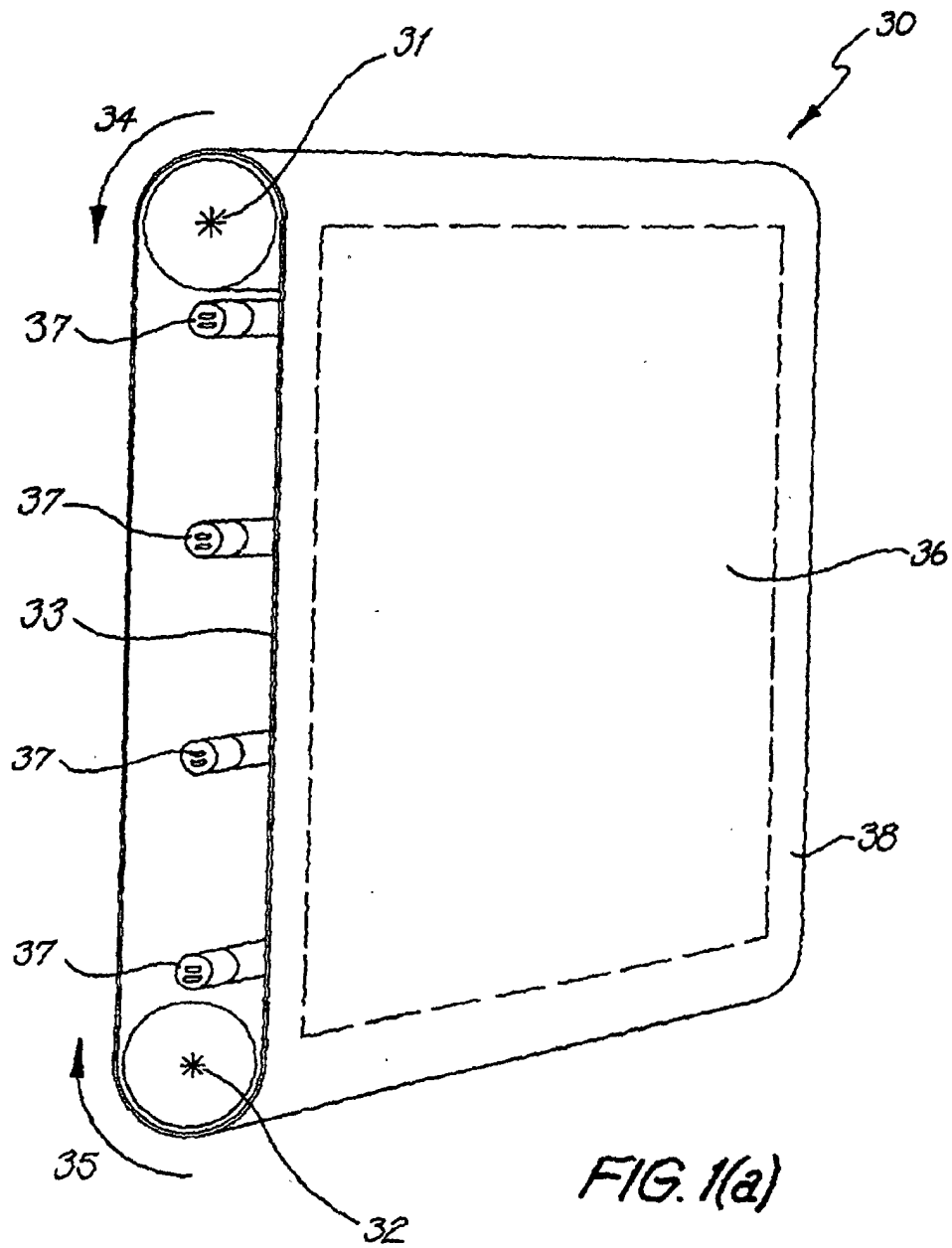
chaque moyen d'affichage (36) est exécuté sous forme d'un élément ou d'éléments translite (36) et/ou de lame(s), qui sont dimensionnés et façonnés pour être montés entre une paire de rouleaux adjacents (31, 32) de telle sorte qu'une ou plusieurs position(s) de repos discrète(s) soit(soient) automatiquement identifiée(s) après que ledit dispositif d'affichage (30) ait été tourné, cas dans lequel, dans ladite ou lesdites position(s) de repos, l'un desdits moyens d'affichage (36) est positionné de façon centrale entre une paire respective de rouleaux (31, 32).

2. Dispositif d'affichage (30), selon la revendication 1, dans lequel ledit ou lesdits élément(s) translite (36) est(sont) attaché(s) audit moyen porteur (38) grâce à une matière adhésive essentiellement transparente/translucide. 30
3. Dispositif d'affichage (30), selon les revendications 1 ou 2, dans lequel ledit ou lesdits élément(s) translite (36) est(sont) attaché(s) audit moyen porteur (38) grâce à une feuille de couverture qui est prévue au-dessus de l'intégralité essentiellement dudit moyen porteur (38), de telle sorte que chaque élément translite (36) soit positionné entre ledit moyen porteur (38) et ladite feuille de couverture. 35
4. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 3, dans lequel ledit ou lesdits élément(s) translite (36) est(sont) attaché(s) audit moyen porteur (33) grâce à un système de fixation à crochets et bouclettes comme le Velcro (MD). 40
5. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 4, dans lequel chacun desdits moyens porteurs (38) possède une lèvre sur celui-ci afin de soutenir un bord d'une lame respective. 45
6. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 5, dans lequel chaque lame peut être facultativement munie d'au moins une partie fenêtre dans celle-ci, et dans lequel un module 50

de signes peut être prévu derrière ladite fenêtre.

7. Dispositif d'affichage (30), selon la revendication 6, dans lequel chaque module de signes comprend : 5
 - au moins un moyen porteur essentiellement translucide permettant de loger de façon amovible une carte à signe ou à signes ;
 - au moins un moyen de fixation permettant de fixer ledit module de signes sur ledit moyen porteur (38). 10
8. Dispositif d'affichage (30), selon la revendication 7, dans lequel ledit moyen de fixation comprend au moins une saillie (40) sur le bord de chaque module, qui est adaptée pour être retenue par ledit moyen porteur (38). 15
9. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 8, dans lequel le dispositif d'affichage comporte en outre un moyen d'entraînement, destiné à entraîner l'un au moins desdits éléments rouleaux (31, 33), et par conséquent à déplacer de façon sélective l'un au moins des moyens d'affichage (36) entre une position de visualisation et une position ou des positions de rangement. 20
10. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 9, dans lequel ledit moyen d'entraînement déplace en continu ledit moyen porteur (38). 25
11. Dispositif d'affichage (30), selon l'une quelconque des revendications 1 à 9, dans lequel ledit moyen d'entraînement fonctionne de façon intermittente, afin de déplacer l'un de deux moyens d'affichage (36) au moins vers ladite position de visualisation, un à la fois. 30
12. Dispositif d'affichage (30), selon l'une quelconque des revendications 5 à 11, dans lequel ledit module de signes destiné à être utilisé avec un dispositif d'affichage possédant des porteurs de lames ou autres, comporte : 35
 - un cadre de module, qui est dimensionné et façonné pour être monté entre une paire de porteurs de lames ; et
 - un moyen de fenêtre d'affichage entre ledit cadre de module, permettant d'introduire de façon sélective et amovible les signes d'affichage dans celui-ci ; 40

caractérisé en ce que ledit module est muni d'une saillie (40) au moins constituant un moyen de fixation de telle sorte à procurer audit module une résistance au glissement le long dudit porteur de lames. 45



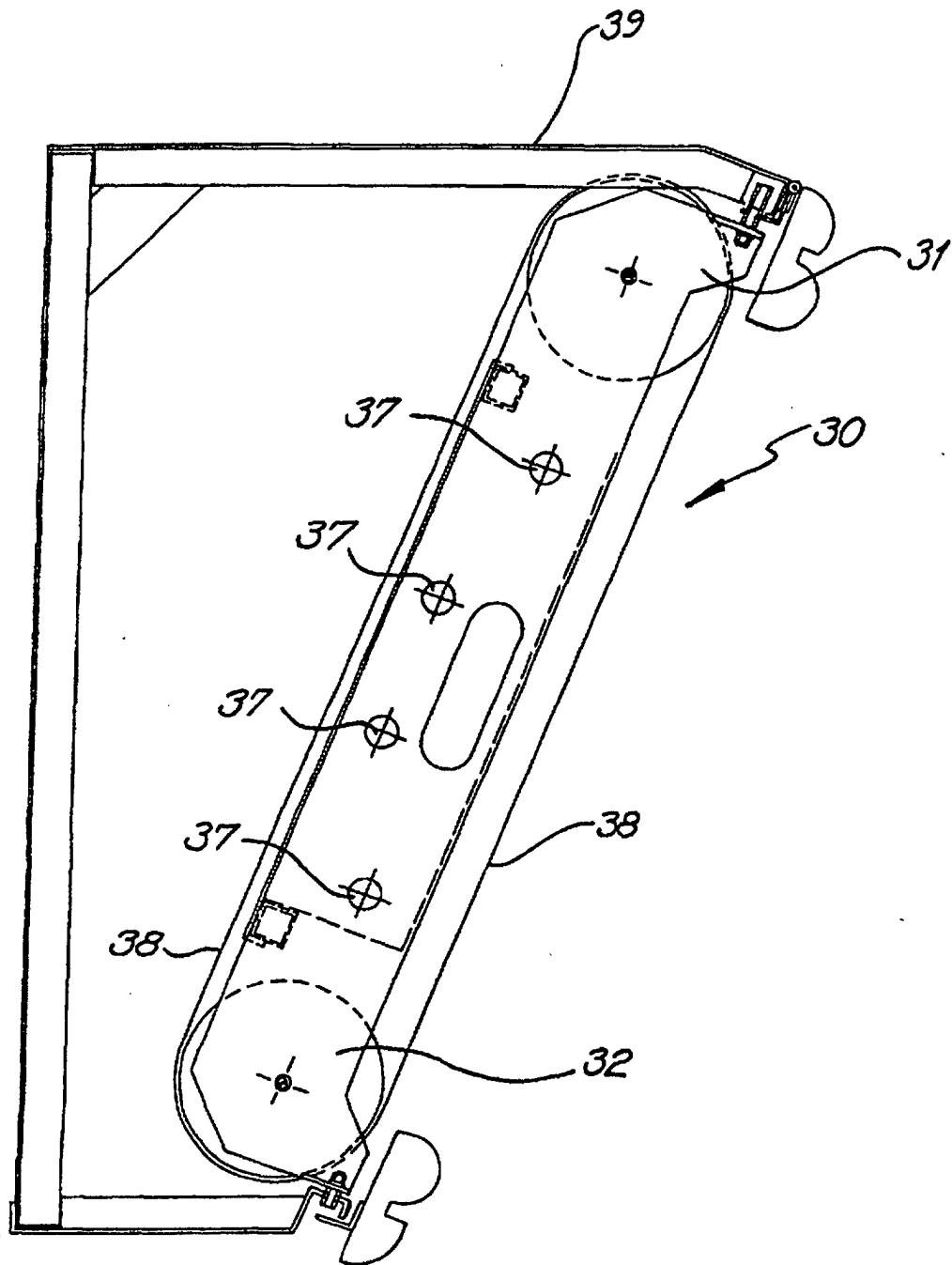


FIG. 1(b)

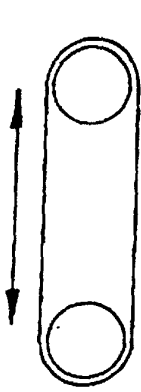


FIG. 2(a)

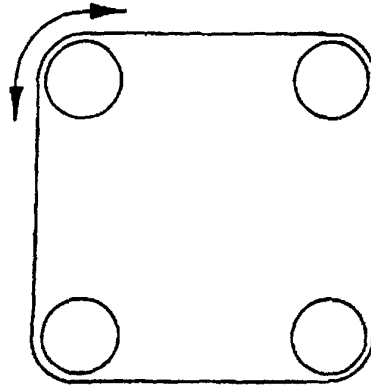


FIG. 2(b)

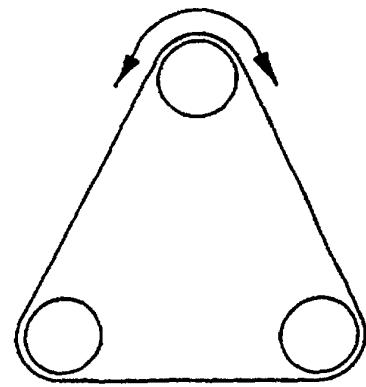


FIG. 2(c)

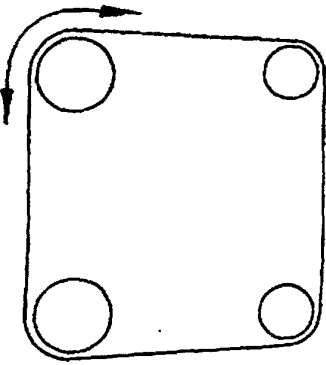


FIG. 2(d)

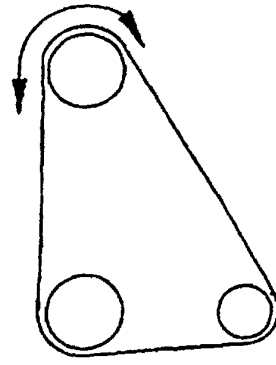


FIG. 2(e)



FIG. 2(f)

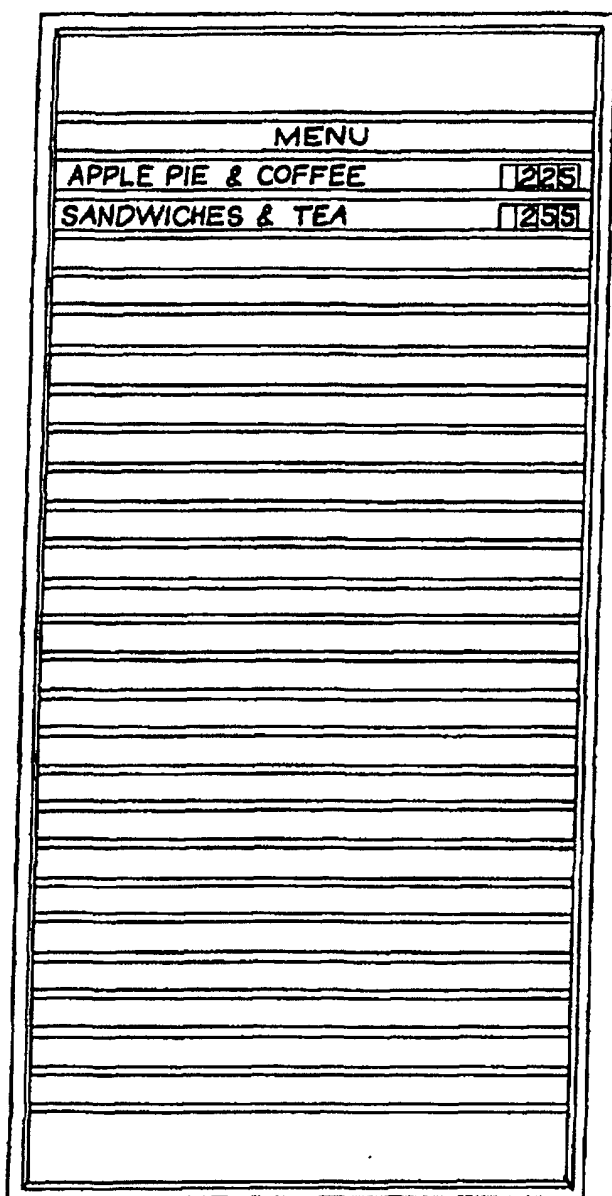


FIG. 3(a)

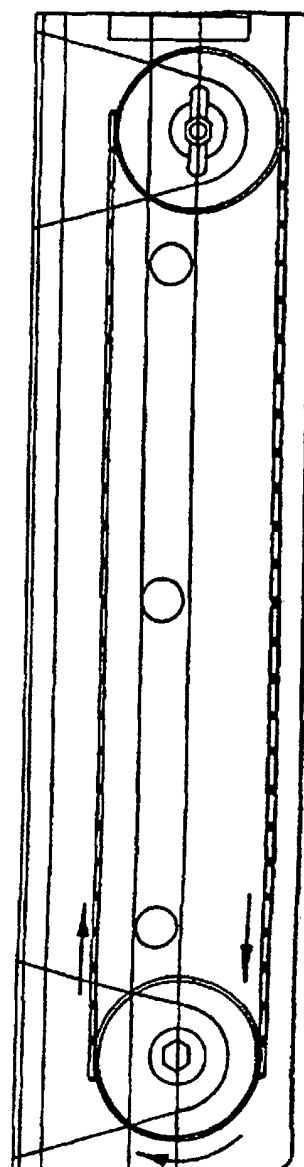


FIG. 3(b)

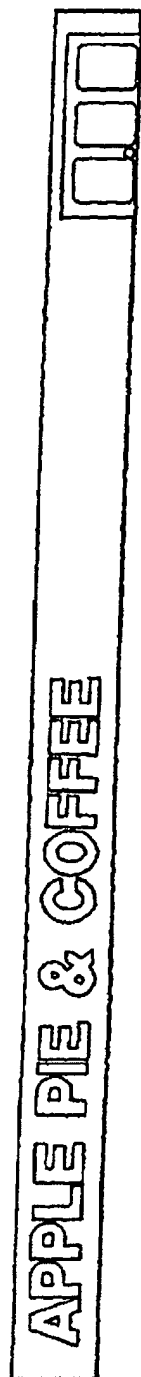


FIG. 3(c)



FIG. 3(d)

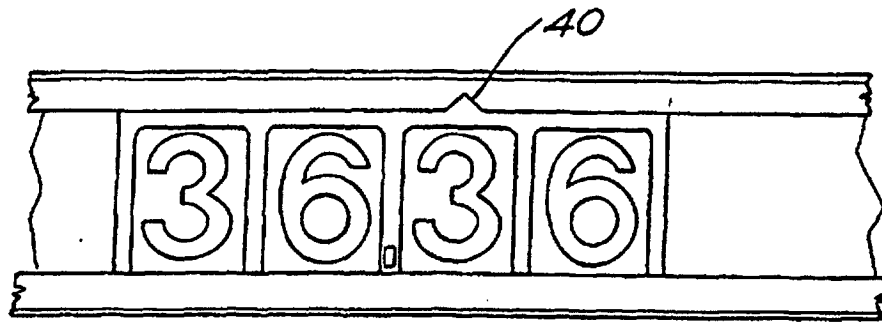


FIG. 4(a)

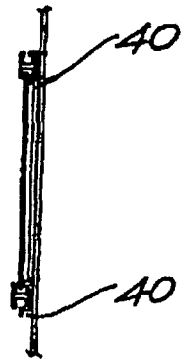


FIG. 4(b)

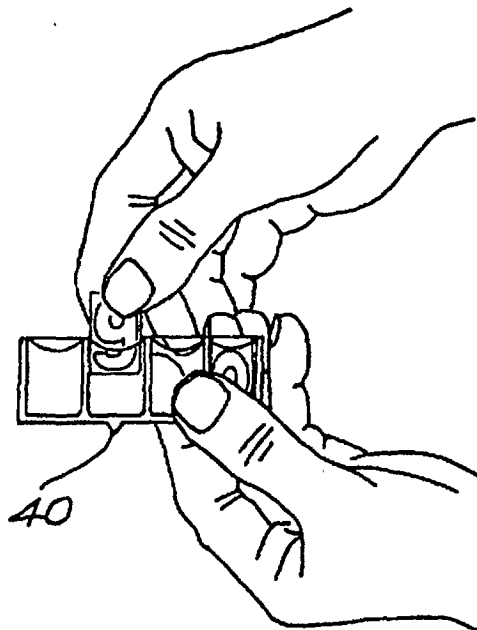


FIG. 4(c)