

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-41782- -2	FECHA: 2015-05-16 23:33:16
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 9
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
HUMBERTO RUBIO CAMACHO

Asunto: Radicación: 14-41782- -2
 Trámite: 11
 Evento: 378
 Actuación: 430
 Oficio: 5381
 Folios: 9

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I	X	Capítulo II	
No. Solicitud Internacional	PCT/ES2012/070590				
Fecha de Presentación Internacional	30/07/2012				

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-041782-00000-0000	27/Febrero/2014
Reivindicaciones:	Rad. N° 14-041782-00000-0000	27/Febrero/2014
Dibujos:	Rad. N° 14-041782-00000-0000	27/Febrero/2014
Prioridades:	ES 201130837	01/Agosto/2011
	ES 201131158	09/Noviembre/2011
	ES 201230370	01/Abril/2012

2. Análisis de la Prioridad

Se aceptan las reivindicaciones de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de las prioridades reivindicadas.

Sin embargo, el número de solicitud de las prioridades en el petitorio está incompleto. Los números correctos son: U 201130837, U 201131158 y U 201230370. Se sugiere al solicitante realizar las correcciones correspondientes.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 26.

Título de la solicitud: "Dispositivo publicitario" (Fl. 1).

El problema planteado en esta solicitud consiste en lograr un dispositivo publicitario que sea visualmente atractivo, sin constituir ningún riesgo para la seguridad de las personas que se encuentran a su alrededor.

Para resolver este problema técnico, la solicitud en estudio propone un dispositivo publicitario que comprende un soporte, unos motivos tridimensionales, unos medios de fijación de dichos motivos al soporte y unos medios de fijación del soporte al suelo.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): G 09 F 7/06.

4. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

El capítulo reivindicatorio no es claro porque:

- La reivindicación 26 y las expresiones: "...para el montaje y fijación de motivos publicitarios..." (reivindicación 1), "...destinado a confundirse con el terreno en el que se sitúa, dotado al mismo del color de dicho terreno." (reivindicación 7), "...de enclavamiento al suelo." (reivindicación 11), "...destinadas a confundirse con el campo en el que se colocará el dispositivo (reivindicación 21); describen funciones, efectos, ventajas o resultados a alcanzar, los cuales no son aspectos susceptibles de patente. Para mayor claridad, el producto reclamado se debe definir técnicamente mediante sus características estructurales. Se sugiere al solicitante eliminar la reivindicación y expresiones citadas.
- La reivindicación 17 no cumple con lo establecido en el artículo 30 de la decisión 486, toda vez que carece de concisión, ya que el talón (21) alojado en el canal longitudinal (11) del soporte (1), ya había sido reclamado en la reivindicación 11. En consecuencia, se sugiere al solicitante eliminar la reivindicación 17.
- Las reivindicaciones 8 a 10 y 22 a 25 son de producto, más sin embargo están definidas por su proceso de fabricación. Lo anterior, sólo es posible si el producto no se puede definir por sus características estructurales, lo cual no aplica a este caso. Se sugiere al solicitante replantear las reivindicaciones citadas definiendo el producto por sus características constructivas.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de prioridad: agosto 1 de 2011, y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	US 2'636.300	'Sign for displaying house numbers'	28/Abril/1953
D2	US 4'387.520	'Sign holder'	14/Junio/1983
D3	US 6'202.369	'Universal anchor system'	20/Marzo/2001
D4	US 1'869.314	'Interchangeable character or symbol and holder therefor'	26/Julio/1932

El documento D1¹ divulga letreros y más particularmente a letreros para mostrar el número de una casa o un edificio (Col. 1, líneas 1 a 3).

El documento D2² divulga un sostenedor para sostener letreros rígidos planos que incluye una base que tienen una ranura que recibe y asienta el borde de un letrero (resumen).

El documento D3³ divulga un sistema de anclaje para diferentes tipos de letreros que incluye un miembro de anclaje elongado y una formación enganchable para soportar firmemente el miembro de anclaje en posición vertical (resumen).

El documento D4⁴ divulga mejoras en caracteres o símbolos intercambiables y sus correspondientes soportes (Pág. 1, líneas 1 a 3).

6. Examen de Patentabilidad (Art 14 D486)

Novedad (Art 16 D486)

La reivindicación 1 consiste en: “*Dispositivo publicitario, caracterizado porque comprende: - un soporte (1) que dispone de una superficie inferior de apoyo...*” (Ver página 17 del radicado N° 14-041782-00000-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D2
Dispositivo publicitario caracterizado por:	Letrero para mostrar números de casa caracterizado por:	Un portador de letreros caracterizado por:
Un soporte que dispone de una superficie inferior de apoyo y de un alojamiento longitudinal en su zona superior.	Un portador (A) que dispone de un anclaje al suelo (C) y de una ranura (14) longitudinal superior (Figs. 1 y 5; Col. 2, líneas 33 a 49).	Un soporte (10) que tiene una base (12) y una ranura longitudinal (42) en su zona superior (Fig. 4; Col. 4, líneas 61 a 66).
Unos motivos publicitarios tridimensionales.	Una pluralidad de números tridimensionales (B) (Fig. 1; Col. 2, líneas 36 y 37)	Un letrero (54) (Fig. 4; Col. 4, líneas 61 y 62).
Unos medios de fijación de los motivos publicitarios al soporte.	Un tornillo (29) es usado para asegurar cada número en el portador (A), los cuales son insertados en la ranura (18) y los	Para insertar el letrero al soporte, una fuerza hacia abajo es aplicada que supera cualquier resistencia que provee las

1 <https://www.google.ca/patents/US2636300?dq=2636300&hl=es&sa=X&ei=SoltVfKQA8iHsQS5hoHYDw&ved=0CB0Q6AEwAA>

2 <https://www.google.ca/patents/US4387520?dq=4387520&hl=es&sa=X&ei=4lktVdHdMs21sAScsYQCbg&ved=0CB0Q6AEwAA>

3 https://www.google.ca/patents/US6202369?dq=publicity+sign+with+ground+anchor+and+sleeve&hl=es&sa=X&ei=P3wuVdv_NsaxsATyooGAaw&ved=0CEAQ6AEwBA

4 <https://www.google.ca/patents/US1869314?dq=1869314&hl=es&sa=X&ei=5tQuVb4iw4exBLvxgKgO&ved=0CCYQ6AEwAQ>

	agujeros (25) de sus respectivos números antes de enganchar con la tuerca respectiva (26) (Col. 3, líneas 23 a 29).	protuberancias (48),(50) y (52) de la almohadilla de presión (44) en la ranura (42) (Fig. 4; Col. 5, líneas 1 a 15).
Unos medios de fijación del soporte al suelo.	El portador (A) esta soportado por un anclaje al suelo (C) (Col. 3, líneas 30 y 31).	La base (12) comprende las extensiones (14) y (16) que, en cuyas superficies inferiores tienen una tira (18) adhesiva (Col. 2, líneas 55 a 65).

De acuerdo con la tabla anterior, las características esenciales de la composición de la reivindicación 1 habían sido divulgadas previamente en los documentos D1 y D2, por lo tanto, la materia reivindicada no es nueva.

Asimismo, los documentos antecedentes divulgan las características de las reivindicaciones dependientes así:

- Reivindicación 2: Una ranura (14) a través de la cual las porciones inferiores (24) de cada uno de los numerales (B) se proyectan (D1: Col. 2, líneas 41 a 52).
- Reivindicación 3: Un tornillo (29) es usado para asegurar cada una de las letras en el portador (A). Los tornillos son insertados a través de la ranura (18) en la parte trasera del portador, y pasan a través de los orificios (25) de la parte inferior (24) de cada número antes de enganchar en la tuerca (26) (D1: Col. 2, líneas 53 a 55; Col. 3, líneas 1 a 29).
- Reivindicación 5: La porción (24) presenta un grueso de dimensión conjugada con la anchura de la ranura (18) del portador (A) (D1: Fig. 5).
- Reivindicación 11: Un portador (A) que dispone de un anclaje al suelo (C) y de una ranura (14) longitudinal superior (Figs. 1 y 5; Col. 2, líneas 33 a 49), al igual que una ranura posterior (18). Una pluralidad de números tridimensionales (B) (Fig. 1; Col. 2, líneas 36 y 37). Una ranura (14) a través de la cual las porciones inferiores (24) de cada uno de los numerales (B) se proyectan (D1: Col. 2, líneas 41 a 52). Un tornillo (29) es usado para asegurar cada una de las letras en el portador (A). Los tornillos son insertados a través de la ranura (18) en la parte trasera del portador, y pasan a través de los orificios (25) de la parte inferior (24) de cada número antes de enganchar en la tuerca (26) (D1: Col. 2, líneas 53 a 55; Col. 3, líneas 1 a 29). Un apéndice inferior (C) en una posición centrada del portador (A) de anclaje al suelo (Col. 3, líneas 30 y 31).
- Reivindicación 13: El apéndice (C) está definido en el propio portador (A) prolongado perpendicularmente desde la superficie inferior de dicho portados (A) (Fig. 1).
- Reivindicación 14: un tornillo (36) asegura el apéndice (C) desmontable, que pasa a través del tornillo (36) que pasa a través del orificio (20) y engancha con la tuerca (32) (Col. 3, líneas 38 a 42).
- Reivindicación 16: Un portador (A) que dispone de un anclaje al suelo (C) y de una ranura (14) longitudinal superior (Figs. 1 y 5; Col. 2, líneas 33 a 49), al igual que una ranura posterior (18). Una pluralidad de números tridimensionales (B) (Fig. 1; Col. 2, líneas 36 y 37). Una ranura (14) a través de la cual las porciones inferiores (24) de

cada uno de los numerales (B) se proyectan (D1: Col. 2, líneas 41 a 52). Un tornillo (29) es usado para asegurar cada una de las letras en el portador (A). Los tornillos son insertados a través de la ranura (18) en la parte trasera del portador, y pasan a través de los orificios (25) de la parte inferior (24) de cada número antes de enganchar en la tuerca (26) (D1: Col. 2, líneas 53 a 55; Col. 3, líneas 1 a 29). Cabe agregar, que el hecho de que el elemento 3 sea transparente, no brinda un efecto técnico significativo a la creación reclamada, toda vez que así este elemento sea de un color opaco seguiría permitiendo la unión de las características que componen el dispositivo publicitario.

Nivel inventivo (Art18 D486)

En cuanto a las reivindicaciones 4 y 15 se tiene lo siguiente:

Reivindicaciones	Características esenciales	D1	D3
Reivindicación 1	Dispositivo publicitario caracterizado por:	Letrero para mostrar números de casa caracterizado por:	Sistema de anclaje universal caracterizado por:
	Un soporte que dispone de una superficie inferior de apoyo.	Un portador (A) que dispone de un anclaje al suelo (C) y de una ranura (14) longitudinal superior (Figs. 1 y 5; Col. 2, líneas 33 a 49).	El sistema de anclaje (10) comprende una placa base plana (20) (Col. 6, líneas 17 a 24)
	Un alojamiento longitudinal en su zona superior.		No menciona.
	Unos motivos publicitarios tridimensionales.	Una pluralidad de números tridimensionales (B) (Fig. 1; Col. 2, líneas 36 y 37)	Letrero ligero o un letrero pesado (28) (Col. 6, líneas 36 a 39).
	Unos medios de fijación de los motivos publicitarios al soporte.	Un tornillo (29) es usado para asegurar cada número en el portador (A), los cuales son insertados en la ranura (18) y los agujeros (25) de sus respectivos números antes de enganchar con la tuerca respectiva (26) (Col. 3, líneas 23 a 29).	El poste (30) del letrero (28) se inserta de forma deslizante en el agujero (14) del sistema de anclaje (10). De esta forma, el poste (30) insertado presentara un ajuste estrecho cuando su porción inferior (32) es anclado en el agujero (14) (Col. 6, líneas 47 a 53).
	Unos medios de fijación del soporte al suelo.	El portador (A) esta soportado por un anclaje al suelo (C) (Col. 3, líneas 30 y 31).	La placa base plana (20) puede ser asegurada al suelo (18) por elementos (24) instalados a través de las aberturas (26) (Col. 6, líneas 25 a 29).
Reivindicación 4	Pasajes verticales para el montaje de unos elementos de anclaje.	No menciona.	Pasajes verticales (26) para el montaje de unos elementos de anclaje (24) (Col. 6, líneas 25 a 30).
Reivindicación 15	Camisas tubulares de inserción de los apéndices inferiores.	No menciona.	Tubo de anclaje (12) donde se inserta el poste (20) del letrero (28) (Col. 6, líneas 1 a 53).

Los documentos D1 y D3 se consideran el estado de la técnica cercano a la invención definida en las reivindicaciones 4 y 15 porque divulgan un letrero para mostrar números de casa y un sistema de anclaje para letreros, respectivamente.

La diferencia entre la invención, definida en las reivindicaciones 4 y 15 y el dispositivo publicitario de D1 consiste en los pasajes verticales para el montaje de unos elementos de anclaje y las camisas tubulares de inserción de los apéndices inferiores.

La diferencia entre la invención, definida en las reivindicaciones 4 y 15 y el sistema de anclaje de letreros de D2 consiste en un alojamiento longitudinal en la zona superior del soporte del dispositivo publicitario.

El efecto que se logra al incluir los pasajes verticales para el montaje de unos elementos de anclaje y las camisas tubulares de inserción de los apéndices inferiores es que proveen un anclaje al suelo seguro.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “cómo modificar el letrero para mostrar números de casa conocido en D1 para proveer un anclaje al suelo seguro del mismo letrero”.

Sin embargo, los pasajes verticales para el montaje de unos elementos de anclaje y las camisas tubulares de inserción de los apéndices inferiores para proveer un anclaje al suelo seguro del mismo letrero, ya está divulgada en el documento D3 que se enseña unos pasajes verticales (26) para el montaje de unos elementos de anclaje (24) (Col. 6, líneas 25 a 30) y un tubo de anclaje (12) donde se inserta el poste (20) del letrero (28) (Col. 6, líneas 1 a 53).

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría los pasajes verticales (26) para el montaje de unos elementos de anclaje (24) (Col. 6, líneas 25 a 30) y el tubo de anclaje (12) donde se inserta el poste (20) del letrero (28) (Col. 6, líneas 1 a 53) del documento D3 en el letrero divulgado en el documento D1 para llegar así al objeto de las reivindicaciones 4 y 15 de la solicitud. Por lo cual se considera obvia.

Ahora bien, en lo que tiene relación con la reivindicación 12 se tiene lo siguiente:

Reivindicaciones	Características esenciales	D2	D4
Reivindicación 1	Dispositivo publicitario caracterizado por:	Un portador de letreros caracterizado por:	Soporte de símbolos o caracteres intercambiables caracterizado por:
	Un soporte que dispone de una superficie inferior de apoyo. Un alojamiento longitudinal en su zona superior.	Un soporte (10) que tiene una base (12) y una ranura longitudinal (42) en su zona superior (Fig. 4; Col. 4, líneas 61 a 66).	Una base o soporte (1) que comprende una porción plana (2) adaptada para descansar en una superficie plana y un cuerpo (3) curvilíneo, el cual consta de ranuras (4) (Pág. 1, líneas 38 a 50).
	Unos motivos publicitarios tridimensionales.	Un letrero (54) (Fig. 4; Col. 4, líneas 61 y 62).	Miembros de caracteres o símbolos (5) (Pág. 1, líneas 51 a 53).
	Unos medios de fijación de los motivos publicitarios al soporte.	Para insertar el letrero al soporte, una fuerza hacia abajo es aplicada que supera cualquier resistencia que provee las	Los miembros (5) constan de una muesca (8) y las ranuras (4) comprenden una lengua (11) que interactúan entre sí (Pág.

		protuberancias (48),(50) y (52) de la almohadilla de presión (44) en la ranura (42) (Fig. 4; Col. 5, líneas 1 a 15).	1, líneas 54 a 65).
	Unos medios de fijación del soporte al suelo.	La base (12) comprende las extensiones (14) y (16) que, en cuyas superficies inferiores tienen una tira (18) adhesiva (Col. 2, líneas 55 a 65).	No menciona.
Reivindicación 12	Bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también son redondeadas.	No menciona.	Bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también son redondeadas (Figs. 1 y 3).
	Espacios adentrados longitudinales en los que se encuentran embocados los orificios transversales.	Espacios (20) y (22) que comprende unos orificios donde se instalan los tornillos (26) (Col.3, líneas 17 a 20).	No menciona.

Los documentos D2 y D4 se consideran el estado de la técnica cercano a la invención definida en la reivindicación 12 porque divulgan un portador de letreros y un soporte de símbolos o caracteres intercambiables, respectivamente.

La diferencia entre la invención, definida en la reivindicación 12 y portador de letreros de D2 consiste en los bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también son redondeadas.

La diferencia entre la invención, definida en la reivindicación 12 y el soporte de símbolos o caracteres intercambiables de D4 consiste en unos medios de fijación del soporte al suelo y unos espacios adentrados longitudinales en los que se encuentran embocados los orificios transversales.

El efecto que se logra al incluir los bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también redondeadas es que aumentan la seguridad y evitan lesiones a un usuario.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “cómo modificar el portador de letreros conocido en D2 que aumentar la seguridad y evitar lesiones a un usuario”.

Sin embargo, los bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también redondeadas para aumentar la seguridad y evitar lesiones a un usuario, ya está divulgada en el documento D4 que se enseña un cuerpo (1) con una porción (3) que comprende los bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también redondeadas (Figs. 1 y 3).

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría un cuerpo (1) con una porción (3) que comprende los bordes longitudinales anterior y posterior redondeados y la parte superior de las paredes verticales también redondeadas (Figs. 1 y 3) del documento D4 en el portador de letreros divulgado en el documento D2

para llegar así al objeto de la reivindicación 12 de la solicitud. Por lo cual se considera obvia.

En cuanto al material flexible o EVA (reivindicaciones 1 y 6), cabe mencionar que en el campo técnico de la solicitud es ampliamente utilizado dicho material para la fabricación de diferentes tipos de letreros. De acuerdo con lo anterior, un técnico medianamente versado en la materia utilizaría un material flexible o goma EVA para la realización de los motivos publicitarios ^{5 6 7}. De igual manera, el documento D1 enseña que los motivos publicitarios pueden ser realizados en un producto de condensación fenólica, lo cual también incluye espuma fenólica⁸, la cual es flexible.

Ahora bien, las reivindicaciones 7 a 10, 18 a 21 y 22 a 25, referidas al acabado de camuflaje y al material del elemento (3), se refieren a aspectos puramente decorativos de la invención, y como tal, no brindan un efecto técnico sorprendente que pueda otorgar nivel inventivo a la creación reclamada.

Las reivindicaciones 8 a 10, 17 y 21 a 25 están afectadas en el numeral 4 de esta comunicación.

7. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	US 2'636.300	1, 2, 3, 5, 11, 13, 14, 16	Novedad/Nivel Inventivo
D2	US 4'387.520	1	Novedad/Nivel Inventivo
D3	US 6'202.369	4 y 15	Nivel inventivo
D4	US 1'869.314	12	Nivel inventivo

5 <https://es.pinterest.com/nuriamolina/carteles-goma-eva/>

6 <http://serigrafia-publicitaria.blogspot.com/>

7 <http://lalla.es/txt/encargos.html>

8 https://books.google.com.co/books?id=ii1i7ZCDDuYC&pg=PA84&lpg=PA84&dq=resina+fenolica+espuma&source=bl&ots=l4t-154gCS&sig=TAWRzJrOEBB4TYz_c45Qrk-O0aE&hl=en&sa=X&ei=DoUtVfzpN_iAsQSmoyDYDQ&ved=0CCMQ6AEwAQ#v=onepage&q=resina%20fenolica%20espuma&f=false

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-05-19

Elaboró: Monica Andrea Gutierrez Almonacid
Revisó: Sonia Andrea Diaz Pirazan

April 28, 1953

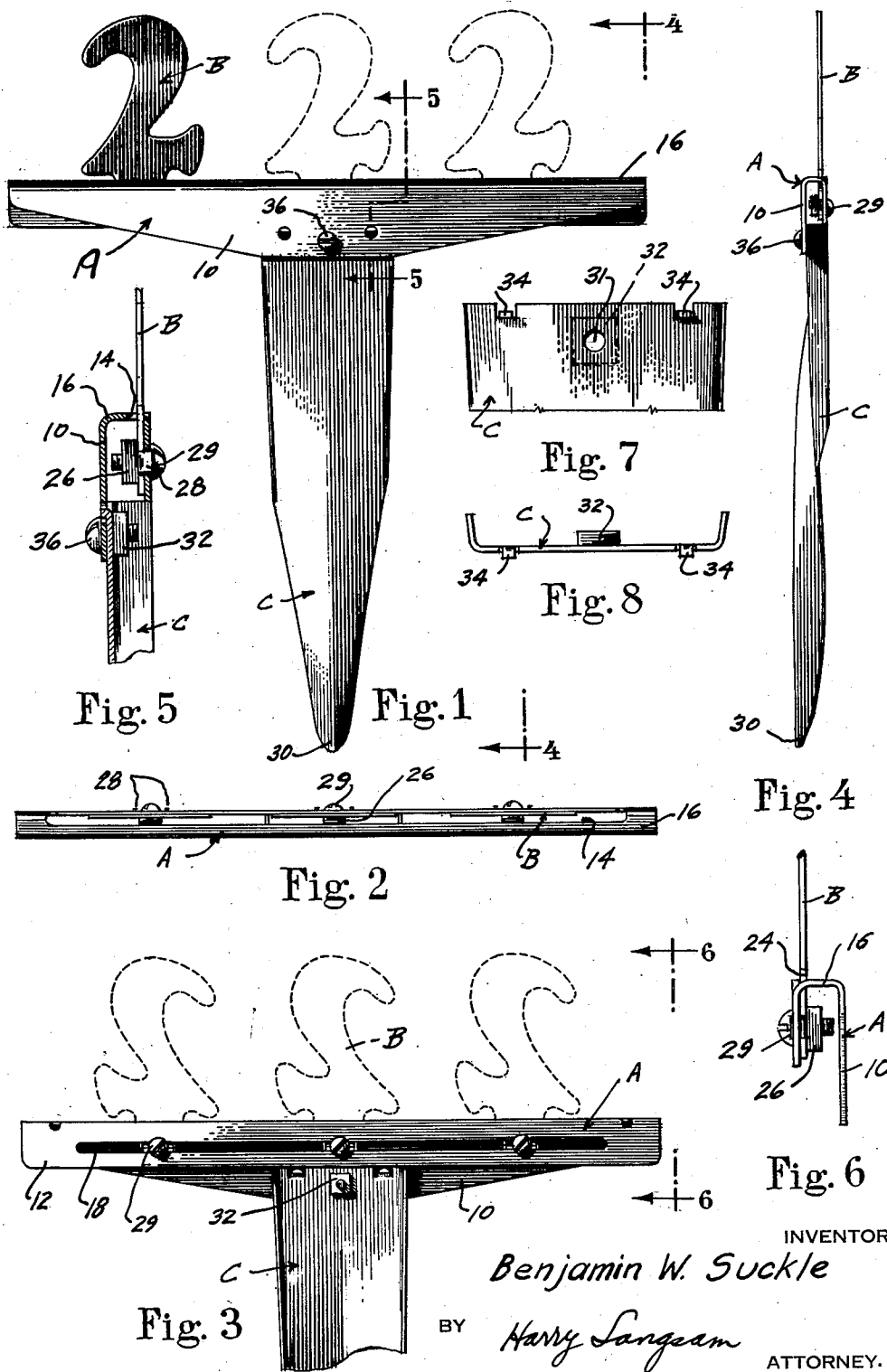
B. W. SUCKLE

2,636,300

SIGN FOR DISPLAYING HOUSE NUMBERS

Filed Nov. 12, 1947

2 SHEETS—SHEET 1



April 28, 1953

B. W. SUCKLE

2,636,300

SIGN FOR DISPLAYING HOUSE NUMBERS

Filed Nov. 12, 1947

2 SHEETS—SHEET 2

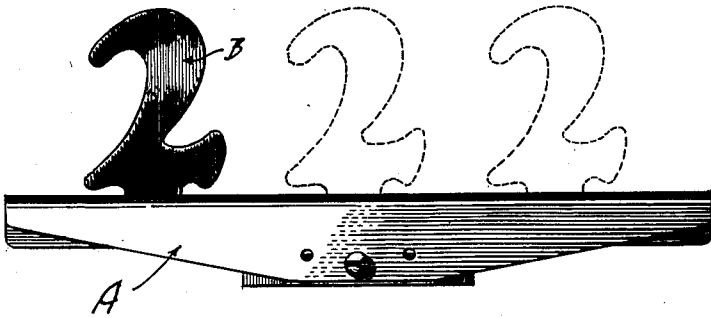


Fig. 9

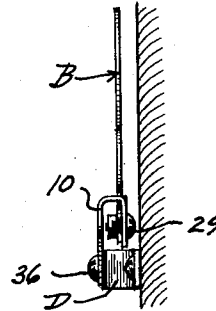


Fig. 10

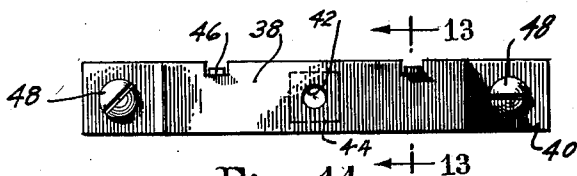


Fig. 11

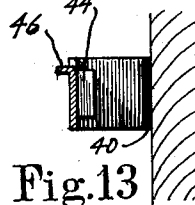


Fig. 13

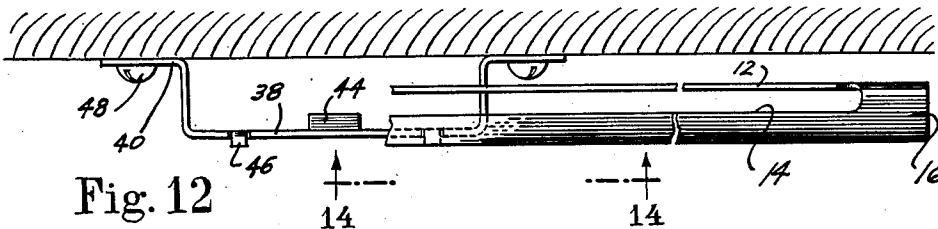


Fig. 12

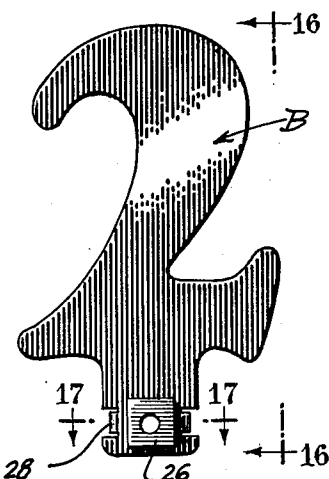


Fig. 15

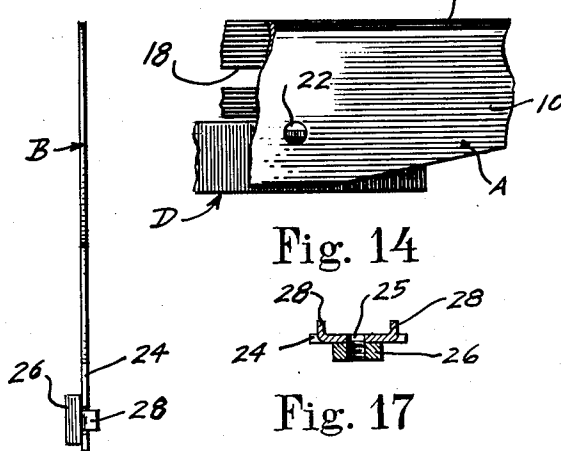


Fig. 14

Fig. 16

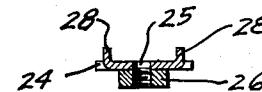


Fig. 17

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UNITED STATES PATENT OFFICE

2,636,300

SIGN FOR DISPLAYING HOUSE NUMBERS

Benjamin W. Suckle, Philadelphia, Pa.

Application November 12, 1947, Serial No. 785,235

1 Claim. (Cl. 40—140)

1

My invention relates generally to signs, and relates particularly to a sign for displaying the number of a house or building.

The signs which hitherto have been manufactured and sold for the purpose have been characterized by poor legibility, and have employed glass in their construction, which is subject to breakage and to obscurity by condensation. In addition, the method of assembling the particular numbers required to the sign is frequently beyond the ability of the average householder. The cost of manufacturing the prior art numerals or letters has been relatively high.

It, therefore, is an object of my invention to provide a number display sign which may be read easily day or night, and which does not employ any glass in its make-up.

Another object of my invention is to provide an interchangeable number display sign which is extremely rugged, and which may be put together by the average person, using only a screw-driver.

Another object of my invention is to provide a number display sign which may be planted in the earth, or which also may be mounted on a flat surface, such as a wall.

Another object of my invention is to provide a number display sign in which all of the numbers are held rigid and neatly aligned at all times.

Another object of my invention is to provide a sign wherein the parts are readily punched or stamped so that they may be readily assembled by a person who does not particularly possess mechanical skill.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, my invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing in which:

Fig. 1 is a front elevation of a sign embodying my invention adapted for planting into the earth.

Fig. 2 is a top view of my invention which is shown in Fig. 1.

Fig. 3 is a fragmentary rear elevation of my invention which is shown in Fig. 1.

Fig. 4 is an end elevation of my invention, as viewed along the lines 4—4 of Fig. 1.

Fig. 5 is a section view taken along the lines 5—5 of Fig. 1.

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Fig. 6 is a sectional view taken along the line 6—6 of Fig. 3 (the ground stake being omitted for clarity).

Fig. 7 is a fragmentary front elevational view of the ground stake.

Fig. 8 is a top view of the ground stake shown in Fig. 7.

Fig. 9 is a front view of the sign, as adapted for mounting upon a wall or other flat surface.

Fig. 10 is an end view of my sign shown mounted against a flat surface.

Fig. 11 is a front view of the auxiliary wall-mounting strap used to support the number display sign upon a flat surface.

Fig. 12 is a fragmentary top view showing the wall-mounting strap together with a portion of the number-carrying frame, attached to a flat surface.

Fig. 13 is a sectional view taken along the lines 13—13 of Fig. 11.

Fig. 14 is a fragmentary detail view taken along the lines 14—14 of Fig. 12.

Fig. 15 is a front view of a numeral which is used in my invention.

Fig. 16 is an end view of the numeral shown in Fig. 15.

Fig. 17 is a sectional view taken along the lines 17—17 of Fig. 15.

Referring now to the drawings, wherein similar reference characters designate similar parts, I show a number display sign adapted to be planted into the earth, or in modified form to be fastened to a wall or a porch post.

The sign adapted for planting in the earth consists of a number carrying frame, or carrier, generally designated as A, a plurality of numbers to be supported thereon, each designated generally as B, and a ground stake, generally designated as C. In the modification of my invention which is adapted to be fastened to a flat surface the ground stake C is replaced by a wall-mounting strap, generally designated as D, but the remainder of the sign, namely, the carrier and the numbers, is identical.

The carrier A, seen best in Figs. 1, 2 and 3 preferably made of heavy gauge metal bent upon itself, and consists of a front apron 10 and a rear wall 12 spaced from and parallel to the apron 10. A narrow vertically extending slot 14 is located in the bend 16 adjacent to the rear wall, and it is through this slot that the lower portions of each of the numerals B project.

A second horizontally-extending slot 18 of approximately the same length as slot 14 is located on the rear wall 12, and extends parallel to the

upper bend 16. This slot 18 is used in the alignment and securing of the numerals B, as will be described presently.

A screw bolt-receiving hole adapted to receive a bolt 36 (Fig. 9) is provided in the apron 10 immediately of the ends thereof, and an additional lug-receiving hole 22 is located on each side of the bolt-receiving hole. The numerals B, illustrated most clearly in Figs. 15, 16, and 17 are stamped from heavy gauge sheet metal, and have a vertical portion 24 depending from the base of the letter, which vertical portion is not visible when the letter has been assembled to the carrier A. A bolt hole 25 is punched in the center of the vertical portion 24 and a nut 26 is welded or otherwise attached to the front surface thereof so that the threaded hole of the nut registers with the punched hole 25. The edges of the vertical portion 24 on either side of the nut 26 are struck rearwardly to form lugs 28. In the assembled sign, the lugs 28 fit inside the slot 18 of the carrier, so as to maintain the letters in rigid vertical alignment. A single screw bolt 29 is used to secure each number to the carrier A. As shown in Figs. 2, 3, and 5, the screw bolts are inserted from the rear of the carrier A, and pass through the slot 18 and the holes 25 of their respective numbers before engaging the threaded nuts 26.

The carrier and numbers are supported by either the ground stake C or the wall strap D. As shown in Figs. 1, 4, 7, and 8, the ground stake is a long piece of metal pointed at one end 30 and formed preferably of heavy gauge sheet metal. The stake is indented longitudinally along its middle, and the edges thereof are flanged to the rear to increase the rigidity of the stake. A bolt-receiving hole 31 is punched in the stake near its top, and a nut 32 is welded over the hole on the rear surface. Lugs 34 are formed upon the top, or blunt end of the stake by indenting the top edge toward the front.

The carrier is assembled to the ground stake by a single screw 35, which passes through the hole 20 in the apron of the carrier and engages the nut 32. The lugs 34 engage the holes 22 in the apron and serve to align the carrier at right angles to the ground stake.

The ground stake is inserted into the earth by hand, no tools being necessary with the pointed end 30.

For mounting on a flat surface the strap D is used. The strap, as shown in Figs. 11, 12, and 13, has a body portion 38 which is offset forwardly from its ends 40. The body 38 is provided with a central bolt hole 42, and a nut 44 is welded to the rear surface of the body with its threaded hole registering with the bolt hole. In addition, a pair of lugs 46 are struck forwardly from the top edge of the strap. The ends of 60

the strap are each provided with a hole through which the wall-mounting screws 48 pass.

To mount the number display sign upon a wall, the strap is fastened to the wall by screws 48 passing through the holes in its ends, and the carrier is then fastened to the strap by the single bolt 36 which engages the strap nut 44 through the apron hole. The strap lugs 46 cooperate with the lug holes 22 in the carrier apron to support the carrier in rigid alignment.

The carrier A, the numerals B, stake C, and the wall strap D are all stamped from a heavy gauge sheet metal which has been coated with enamel of a dark color. When the sign is placed upon a light background, or if it is illuminated by a light from the rear, the letters appear in sharp outline and contrast, and is very readable.

Since the various components of the sign have their securing nuts permanently welded thereto the sign is easily assembled, and has a neat workmanlike appearance when completed.

The material of which the parts embodying my invention may be made may be iron, steel, aluminum, copper, or a phenolic condensation product.

Although my invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

I claim as my invention:

A sign comprising a carrier of stamped metal having a pair of spaced edges defining a horizontally extending slot therein and a vertically extending slot, a removable designation having a vertical extension thereon, said vertical extension protruding within said vertical slot, a pair of horizontally positioned lugs integrally formed with said extension, a threaded bore on said extension and being located between said lugs, said lugs interfitting with said spaced edges defining said horizontally extending slot, and a holding bolt adapted to interfit with said bore and being adapted to engage said carrier whereby said carrier and said designation will be held together.

BENJAMIN W. SUCKLE.

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[54] **SIGN HOLDER**

[76] Inventor: **James E. Ahrens**, 435 N. Old Ranch Rd., Arcadia, Calif. 91006

[21] Appl. No.: **222,599**

[22] Filed: **Jan. 5, 1981**

[51] Int. Cl.³ **G09F 3/18; G09F 1/10; G09F 7/02; A47F 7/14**

[52] U.S. Cl. **40/16.6; 40/124.4; 40/611; 40/606; 40/490; 52/823; 52/38; 52/716; 248/473; 248/466; 273/148 A**

[58] Field of Search **40/606, 610, 592, 16.4, 40/10 R, 16, 609, 618, 611, 616, 11 R, 622, 16.6, 17, 10 D, 18, 20 R, 23 R, 124.4, 124, 124.2, 490, 491; 248/466, 468, 473, 580, 611, 613; 52/36, 38, 716, 823; 273/148 A, 150, 151, 269; 46/31; 294/6, 27 R**

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Primary Examiner—Gene Mancene

Assistant Examiner—Michael J. Foycik

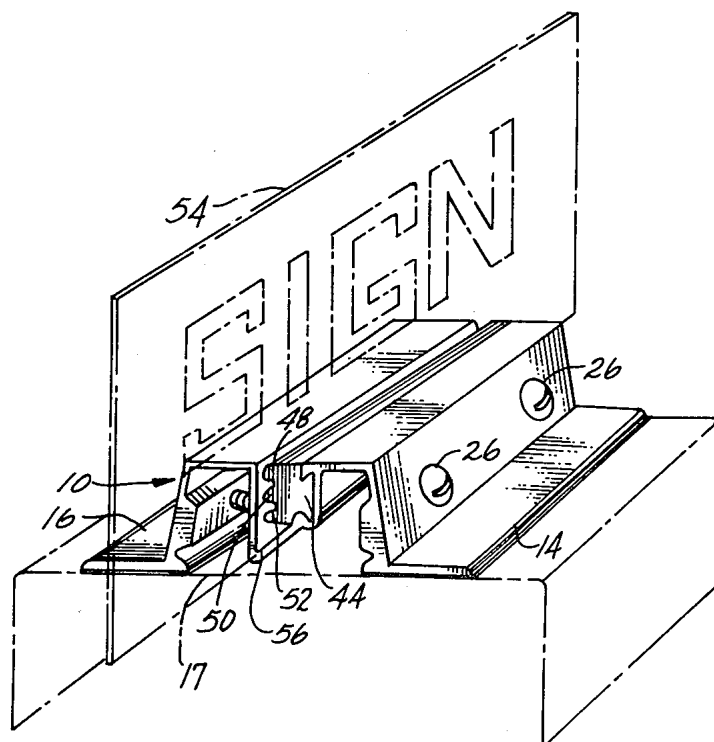
Attorney, Agent, or Firm—Christie, Parker & Hale

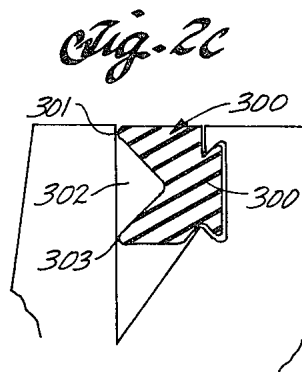
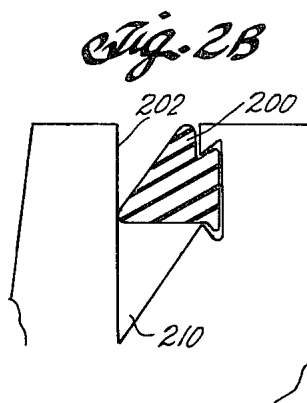
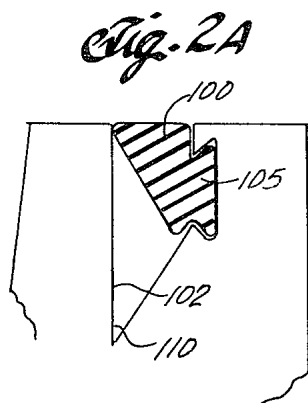
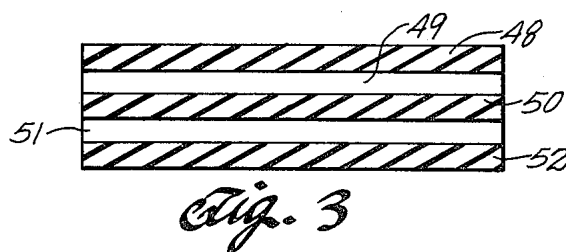
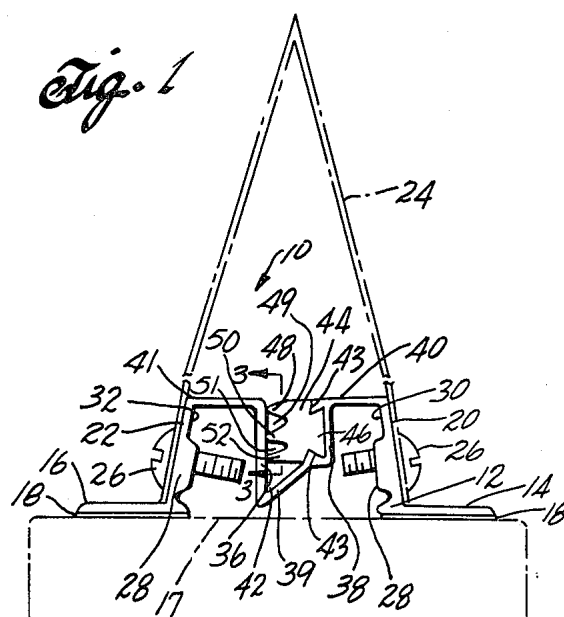
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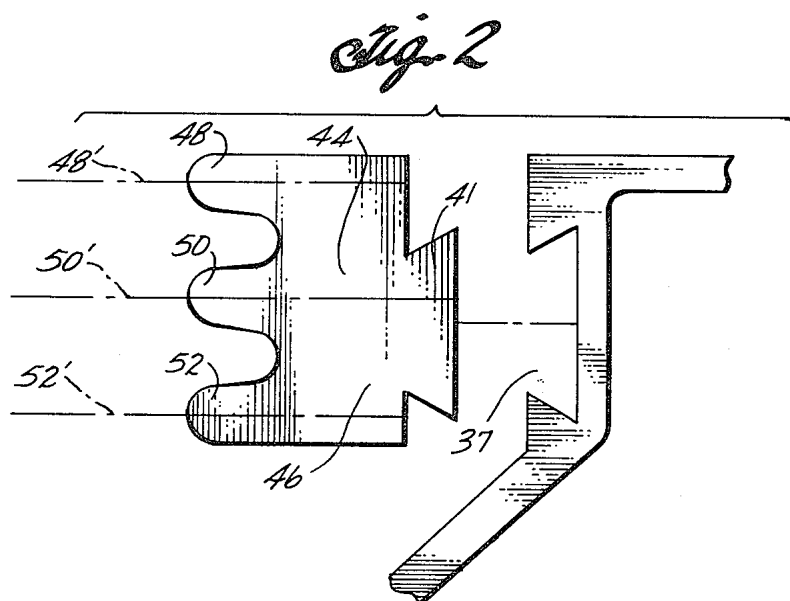
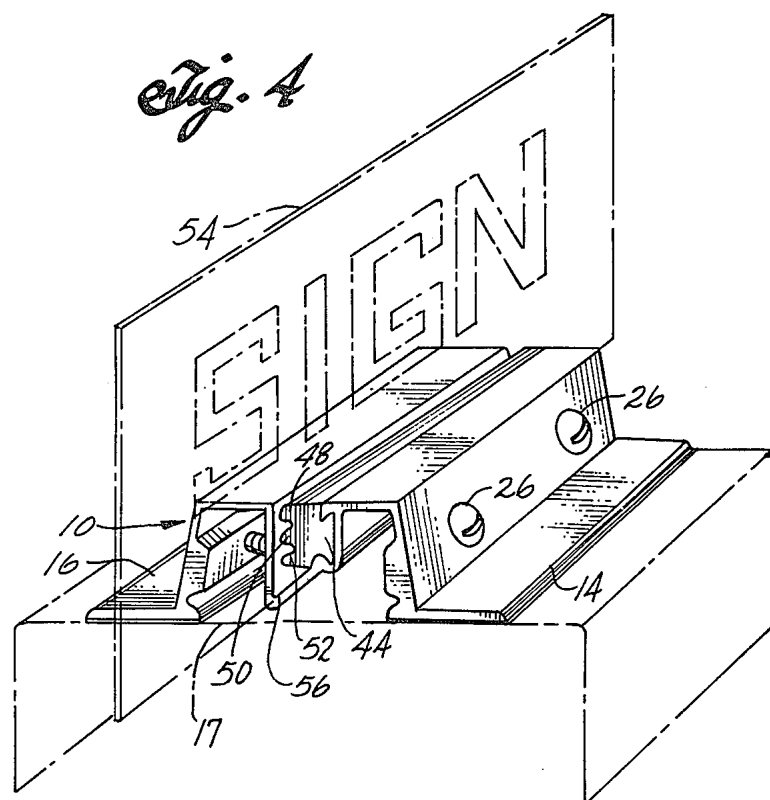
ABSTRACT

A holder for holding thin rigid planar signs includes a base having a trough for receiving and seating an edge of the sign. An essentially planar wall extends from the trough against which the sign is urged by a pressure pad in order to maintain the sign in a stationary position. The pressure pad is mounted in the base and has a plurality of blades projecting essentially normal to and abutting the surface of the planar wall. Upon insertion of the sign in the holders, the blades exert a resulting force on the sign to urge the sign flush against the planar wall. By virtue of the seating of the sign edge in the trough, the sign is prevented from rotation away from the wall and out of the holder as a result of wind forces acting on the sign.

12 Claims, 7 Drawing Figures







SIGN HOLDER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to sign holders, and more specifically, to a sign holder allowing for rapid insertion and removal of signs formed from thin, planar sheet material.

2. Description of the Prior Art

Signs and sign holders are old in the art. Several holders have been proposed for holding thin signs. Miller, for example, in U.S. Pat. No. 3,757,443 describes a sign having two facing rectangular boards that abut at their tips and ends, but are bowed apart at the midpoint of their bottoms. A short block is connected to the bottoms of the respective panels at a midpoint of the panels, such panels being secured to the block by means of locking screws. The block includes a groove for receiving a single card-type sign that is anchored by means of the locking screws. However, Miller discloses that such a sign does not have the wind resistance of the two-panel sign and would be useful primarily for indoor applications.

Another device is described by Hubbell in U.S. Pat. No. 2,530,821. Hubbell discloses a bulletin sheet holder support in which the sheet is hung from its upper end. This device has first and second interconnected flanges arranged in a general U-shape which is downward facing, the first flange for mounting on a flat vertical wall surface. A flexible blade extends from the extremity of the second flange across the holder and contacts the first flange. Sheet material to be held by the holder is slipped up between the blade and the first flange. After insertion the weight of the material, when released, will draw the blade downward setting up a binding action between the blade, the flange and the sheet material. The structure of the holder described by Hubbell does not solve the problem addressed by applicant since the holder is utilized in indoor applications, the sheet in the holder lies against a flat vertical wall and the sheet is hung from the top. Thus, the sheet would be incapable of rotating away from the wall not due to the constructional features of the holder, but by virtue of the sheet's abutment with the wall. Additionally, securement of the sheet in the holder relies upon the downward pull of the material on the blade.

Yet another commercially-available holding device has a vertical wall portion having a pair of single leaf pressure-applying springs in contact with the lower portion of the wall. A sign is held between the wall and the springs. Upon insertion of a sign in the holder, the springs urge the sign against the flat wall for the purpose of securing the sign in the holder. The holder, however, suffers from inability to withstand the force of winds on the sign, since the sign in response to such winds is capable of rotating about the springs and out of the holder. Additionally, in order for the springs to apply sufficient pressure on the sign against the wall at the lower portion of the wall, the spring must be relatively stiff. Consequently, the device is characterized in that the sign may be readily inserted but fairly difficult to remove.

The present invention overcomes the aforementioned deficiencies.

SUMMARY OF THE INVENTION

Briefly, an embodiment of the present invention is a holder for holding a thin planar panel. The holder has a base and a trough or groove defined within the base. The trough is adapted for receiving an edge of the sign and for locating the sign in the holder. An essentially planar wall extends from the trough. Resilient blade means are mounted in the base and are oriented for urging a sign inserted in the holder against the wall. The trough restrains the edge of the sign so that the sign is prevented from rotation away from the wall.

As a feature of the invention, the resilient blade means comprises a base portion and a plurality of blades extending from the base portion. Each blade lies in a plane substantially normal to the wall, and each blade has a tip that terminates adjacent the surface of the wall. Preferably, the blade means includes three blades.

Preferably, the blade means is formed of semi-rigid resilient material such as rubber. The three blades defining the resilient finger means provide ease of insertion and removal of the sign from the holder, while urging the sign against the planar wall through three pressure points.

As a feature of the invention and by virtue of the seating of the edge of the sign in the trough, the sign is prevented from rotation out of the holder under the action and influence of strong winds.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation view in cross section of a holder embodying the present invention in which a triangular-shaped sign is shown in phantom;

FIG. 2 is an exploded partial side elevation view of the pressure pad and supporting wall of the holder of FIG. 1;

FIGS. 2A and 2B are partial side elevation views of pressure pad arrangements having a single point of contact with a sign inserted in the holder of FIG. 1;

FIG. 2C is a partial side elevation view of a pressure pad arrangement having two points of contact with a sign inserted in the holder of FIG. 1;

FIG. 3 is a partial cross-sectional view along line 3—3 of FIG. 1; and

FIG. 4 is a perspective view of the holder of FIG. 1 in which a thin, rigid, planar sign inserted in the holder is shown in phantom.

DETAILED DESCRIPTION

Referring to FIG. 1, there is shown in cross section the holder 10 according to the present invention. The holder 10 comprises a base 12 formed preferably of rigid material such as, for example, extruded aluminum, mounting screws 26 and pressure member or pad 44. The base 12 includes a pair of essentially flat flange-type extensions 14 and 16 that form a pedestal for mounting upon a base support surface 17. For example, in a conventional automobile service station, the base support surface 17 may be the top of a gasoline pump to which the holder is mounted for purposes of displaying the fuel cost.

Attached to the lower surfaces (as viewed in FIG. 1) of extensions 14 and 16 is a pressure-sensitive adhesive strip 18 disposed along the lower surfaces of the extensions. The adhesive may be any one of a number of commercially-available adhesives known to those in the art. The lower surface of the adhesive 18 may be covered with a release liner removable just prior to installa-

tion of the holder. Removal of the release liner exposes the lower surface of the adhesive in preparation for attaching the holder to a support surface. Although the holder of FIG. 1 is shown in a horizontally mounted position, it is to be understood that the holder may be installed in any orientation such as on the side of a support surface or on a ceiling structure to provide a downward hanging sign capability.

The holder includes a pair of symmetrical and inclined sides 20 and 22 that extend upward from extensions 14 and 16 respectively. The sides 20 and 22 lay along the lower sides of an isosceles triangle to provide a mounting surface for signs having triangular cross sections. Such a triangular-shaped sign 24 is shown in phantom in FIG. 1. The sign 24 is secured to respective holder sides 20 and 22 by means of mounting screws 26. A mounting screw 26 extends through respective sides 20 and 22 and through raised land portions 28 located on the interior surfaces 30 and 32 of sides 20 and 22 respectively. The raised land portions 28 provide a greater amount of screw thread area for the screws 26 than is available in sides 20 and 22. Thus, the raised land portion 28 provides for enhanced structural rigidity for mounting a triangular-shaped sign.

To be explained in more detail, the holder 10 has an essentially planar wall 36 and a pressure pad mounting wall 38. The walls 36 and 38 are interconnected to the holder side walls 20 and 22 by means of horizontal ribs 40 and 41 respectively. Wall 38 is substantially parallel to wall 36 and has a lower inclined wall portion 39. Wall 38 forms a backing for pressure pad 44 and is in fixed relation to wall 36.

The juncture of walls 36 and 39 at the lower extremities thereof form a V-shaped trough or groove 42. The trough 42 extends for the length of the base 12 and as will be explained receives the lower portion of a single planar sheet sign inserted in the holder.

Extending from wall 38 is a pressure pad 44 formed of semi-rigid yet resilient material such as rubber. The pressure pad 44 is mounted at its base region 46 in a dovetail arrangement to wall 38. The mortise 37 of wall 38 and tenon 41 of the base region 46 that form such dovetail arrangement is shown in FIG. 1 at 43 and in a partial exploded view in FIG. 2.

The pressure pad 44 includes 3 projecting spaced apart blades 48, 50 and 52. The blades 48, 50 and 52 have a centerline 48', 50' and 52' respectively that is orthogonal to wall 36. The blades extend longitudinally for the length of the holder (see FIG. 4) and are arranged, as viewed in FIG. 4, in a vertically spaced apart relation. Consequently, as a sign is inserted into the holder, the sign first contacts blade 48 then blade 50 and finally blade 52.

Although the extremities of the blades may be located in the region of the surface of wall 36, in the preferred embodiment the blades are sized such that the extremities thereof are adjacent and therefore just contact the surface of wall 36. Due to the resilient nature of the blade material, the blades are capable of bending in response to insertion of a sign in the holder.

It has been found that pressure pads having single and double blades do not provide the ease of insertion and removal of a sign from the holder as does the three-blade arrangement described herein.

A single-blade arrangement, as shown in FIG. 2A, provides a holder in which insertion of a sign is difficult since the blade material between the point of contact between the blade 100 and the dovetail mounting ar-

range ment 105 is being compressed rather than bent as the sign is being inserted into the holder. Due to the amount of pad material, the pad does not readily "yield" under insertion forces and thus the holder's utility suffers because of the difficulty in inserting a sign therein.

Additionally, due to the amount of pad material and general triangular shape of the pad, the sign is wedged in a ratchet like manner against wall 102 with increasing force as the sign is inserted into the holder. Thus, as the sign is urged into the holder, resistance to insertion of the sign into the holder increases.

Removal of the sign, however, does not present the problems just described. Namely, removal of the sign causes the pad to be drawn in a direction away from the wall 102 so that upon initial movement of the sign out of the holder the force urging the sign against the wall 102 is reduced. The reduced force acting on the sign provides for easier sign removal relative to sign insertion.

FIG. 2B shows a pressure pad 200 having the pad 100 of FIG. 2A inverted so that the point of contact of the pad 200 with the wall 202 is in the vicinity of the trough 210. The comments concerning the device shown in FIG. 2A are equally applicable here, however, in a reverse sense in that the device of FIG. 2B provides for ease of insertion of a sign and relative difficulty in removal.

Additionally, since the point of contact of the pad 200 with the wall 202 is in the vicinity of the trough 210, the sign may rotate out of the holder (in a clockwise direction as viewed in FIG. 2B) under the influence of corresponding forces created by wind and the like.

The device of FIG. 2C shows a pad having upper and lower points of contact with wall 302 at 301 and 303 respectively. The pad, however, provides the problems that characterize the devices shown in FIGS. 2A and 2B. Namely, a sign is difficult to insert due to upper contact 301 and as described for the device of FIG. 2A, and difficult to remove due to lower contact 303, as described for the device of FIG. 2B.

Advantageously, the blades 48, 50 and 52 (as shown in FIG. 1) extend as thin fingers from the pressure pad 44 and contact the wall 36 for the length of the pad. As shown in FIG. 1, the blades are arranged in a periodic fashion such that adjacent blades are spaced vertically and equally apart. The spaces between the blades and shown at 49 and 51 are of similar and complementary cross section. The cross section of the blades and spaces as shown in FIG. 1 are sinusoidal in nature, however, it is to be understood by those skilled in the art that other cross-sectional shapes such as triangular are contemplated to be within the scope of the invention.

By virtue of the space between the blades and since the pad material comprising the blades acts in bending rather than in compression, the blades are capable of readily bending in response to insertion and removal of a sign from the holder.

The three blade, pressure pad arrangement provides for ease of insertion, removal and maintenance of the sign in the holder.

Referring now to FIG. 4, there is shown the holder 10 in which a sign 54 has been inserted. The sign 54 is typically a planar sheet of rigid material such as plastic or metal. The sign 54 is inserted into the holder 10 such that the lower edge 56 of the sign lies in the trough 42 in abutment with the bottom edge thereof. The abutment of the sign with the trough bottom establishes the vertical position of the sign.

To insert the sign in the holder, a downward force is applied to the sign sufficient to overcome any resistance provided by the blades 48, 50 and 52. By virtue of the resiliency of the blades of pressure pad 44, a force is exerted by the blades on the sign in a direction to urge the sign 54 flush against the wall 36. The force results from the displacement of the blades from the surface of wall 36 by the sign. As a result of insertion of the sign into the holder, blades 48, 50 and 52 are bent downward (as shown in FIG. 4).

In addition to providing a seat for the sign edge 56, the trough 42 prevents rotation of the sign out of the holder as a result of corresponding forces on the sign such as caused, for example, by strong winds. As viewed in FIG. 4, rotation of the sign out of the holder in a clockwise manner about the pressure pad blades 48, 50 and 52 is prevented by virtue of the interference of the sign edge 56 with the wall 36. Similarly, rotation of the sign in a counterclockwise manner about the pressure pad blades is prevented by virtue of the interference of the sign edge 56 with the lower extremity of wall 38.

Advantageously, the V-shaped trough 42 provides for seating signs that have different thicknesses. Thus, a "thin" (measured between sign faces) sign would seat lower in the trough than a "thick" sign.

While the basic principle of this invention has been herein illustrated along with one embodiment, it will be appreciated by those skilled in the art that variations in the disclosed arrangement both as to its details and as to the organization of such details may be made without departing from the spirit and scope thereof. Accordingly, it is intended that the foregoing disclosure and the showings made in the drawings will be considered only as illustrative of the principles of the invention and not construed in a limiting sense.

What is claimed is:

1. A holder for an essentially thin rigid planar sign, the holder comprising:

a base;

first and second rigid walls formed in the base;

a V-shaped groove defined by the first and second walls within the base, the groove being adapted for receiving an edge of the sign; and

resilient blade means mounted in the base, the blade means oriented for urging a sign inserted in the V-shaped groove against the first wall, the V-shaped groove restraining an edge of the sign so that the sign is prevented from rotation away from the wall;

the first and second walls being characterized in that they define a fixed angle therebetween during insertion and removal of the sign,

the blade means being characterized in that there is a deformation thereof during insertion and removal of the sign to facilitate ease of insertion and removal.

2. The holder of claim 1 wherein the groove has an extension along a substantially straight line, and wherein the blade means comprises a resilient member having a base portion and a plurality of spaced apart blades extending from the base portion, each blade extending along an axis lying in a plane substantially normal to the first wall, the plane in which the axis lies being parallel to the extension of said groove, each blade having a tip that terminates adjacent the surface of the first wall.

3. The holder of claim 2 wherein said plurality of blades comprises three blades.

4. The holder of claim 3 wherein the base comprises means for securing said base to a support surface separate from the holder.

5. The holder of claim 4 wherein the securing means comprises a pair of extensions lying in a plane substantially normal to the wall, the extensions having means for adhesively mounting said extensions to such support surface.

6. The holder of claim 3 wherein the base comprises a pair of inclined flat surfaces facing away from each other in substantially opposite directions for mounting thereon respective sides of a sign having a triangular cross section.

7. The holder of claim 6 comprising means for securing respective sides of such sign to the inclined flat surfaces.

8. A holder for planar signs comprising:

a base;

first and second spaced apart walls located in the base;

an inclined wall in the base interconnecting said spaced apart walls, the inclined wall being inclined with respect to the first wall and forming thereby a trough between the first wall and the inclined wall, the trough adapted for seating an edge of a sign; and

resilient means extending from said second wall for urging a sign inserted in the holder against the first wall,

the resilient means being characterized in that it deforms during insertion and removal of the sign to facilitate ease of insertion and removal of the sign, the first, second and inclined walls being characterized in that they remain in fixed relative position during insertion and removal of the sign.

9. A holder according to claim 8 wherein said base includes means for securing said resilient base portion therein, comprising a dovetail joint between the resilient pressure member and the backing for securing the pressure member to the backing.

10. The holder of claim 1 wherein the plane of first is parallel to the plane of the sign to be inserted.

11. A holder according to claim 1 wherein the resilient blade means has an external surface which is sinusoidal and faces the first wall.

12. A holder for a thin, rigid substantially planar panel, the holder comprising:

a base including a first side adapted for mounting the holder to a separate surface;

a second side having a V-shaped groove with an opening extending therein for receipt of such planar panel;

a substantially rigid planar wall along a first side of said groove;

a resilient pressure member on a second side of said groove including at least three spaced apart resilient blades positioned at differing distances from the opening of the groove to press the panel against said wall, the blades being characterized in that there is a deformation thereof during insertion and removal of the sign to facilitate insertion and removal, the resilient pressure member including an elongated resilient base portion from which said blades extend toward said wall; and

means for securing the resilient pressure member on said second side of said groove comprising a dovetail joint.

* * * * *



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Partee et al.

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(45) **Date of Patent:** **Mar. 20, 2001**

(54) **UNIVERSAL ANCHOR SYSTEM**

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U.S.C. 154(b) by 0 days.

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(22) Filed: **Feb. 3, 1999**

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Aug. 21, 1996, now abandoned.

(51) **Int. Cl.⁷** **E02D 5/80; E02D 27/42**

(52) **U.S. Cl.** **52/165; 52/296; 52/298;**
52/726.3; 52/726.4; 52/736.1; 52/736.4;
40/606; 248/523; 248/530; 285/322; 285/324;
403/371

(58) **Field of Search** **52/156, 165, 295,**
52/296, 297, 298, 726.3, 726.4, 732.3,
736.1, 736.3, 736.4, 737.4, 737.5, 738.1;
40/606, 612; 248/156, 519, 523, 530; 285/148.23,
148.25, 148.26, 322, 323, 324; 403/365,
371, 372, 109.1, 110, 377

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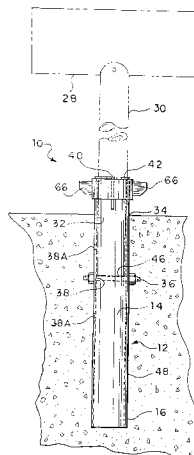
Primary Examiner—Laura A. Callo

(74) *Attorney, Agent, or Firm*—Richard C. Litman

(57) **ABSTRACT**

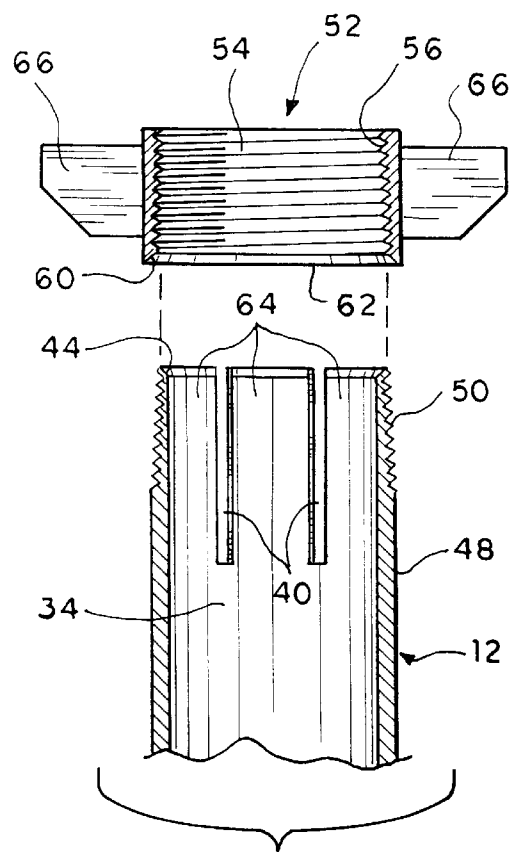
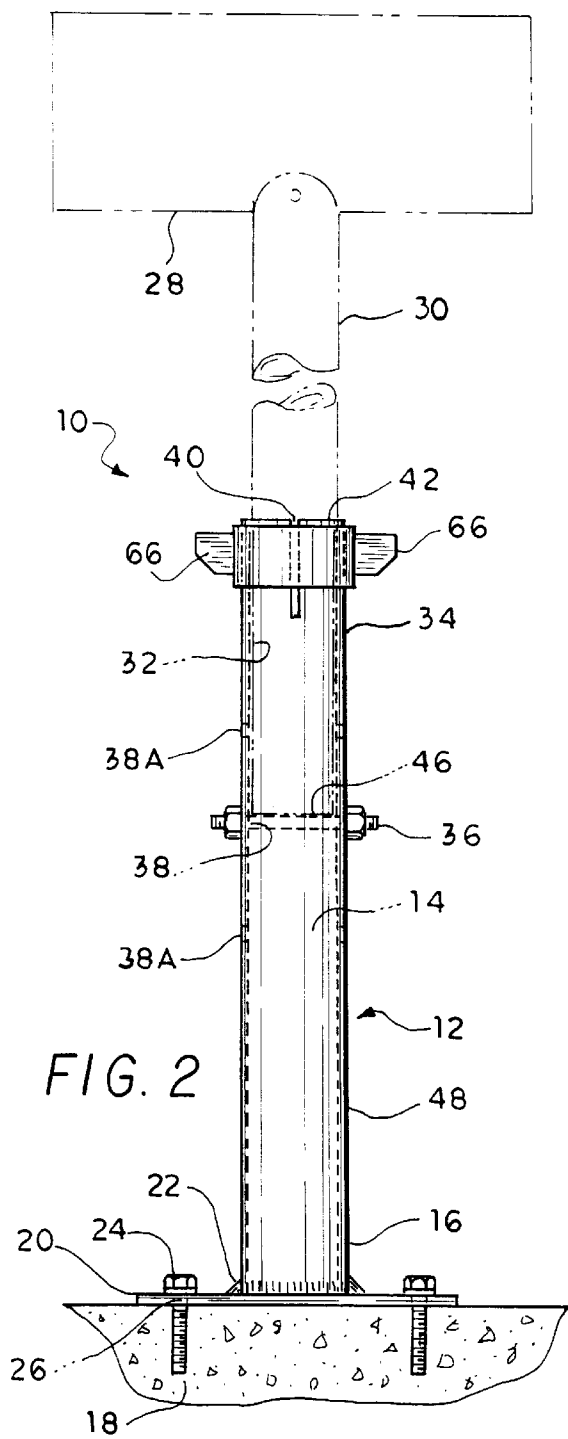
An anchor system for alternate types of signage includes an elongated anchor member and an attached, lowermost formation engageable with an underlying foundation to firmly support the anchor member in a substantially vertical disposition. A bore within the anchor member slidably receives the lower portion of an elongated sign pole or marker device, with a stop element within the anchor member serving to limit the length of the sign pole inserted therewithin. Secure attachment of the sign pole relative the vertical anchor member is achieved by the application of a compression element comprising a collar and having a tapered, inner surface engageable with the upper portion of the anchor member. The inclusion of a plurality of slots in the upper portion of the anchor member provides individual segments which are subsequently deflected radially inwardly upon the tightening of the compression element. Sign poles of lesser diameters may be accommodated with any one anchor member by the insertion of a split sleeve adaptor intermediate the sign pole and anchor member, while altering the height of the anchor member allows attachment of various types and sizes of signage, including signs atop the pole or barricade poles for traffic marking. Various materials may be used for the components, such as metal or nonmetallic, with the latter particularly adaptable for traffic barricades and wherein the anchor member is of minimal height.

13 Claims, 5 Drawing Sheets



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2,784,015	3/1957	Swanson .	4,785,593	11/1988	Munoz, Jr. .
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3,335,534	8/1967	Hester et al. .	5,337,989	8/1994	Apple .
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			* cited by examiner		

FIG. 1



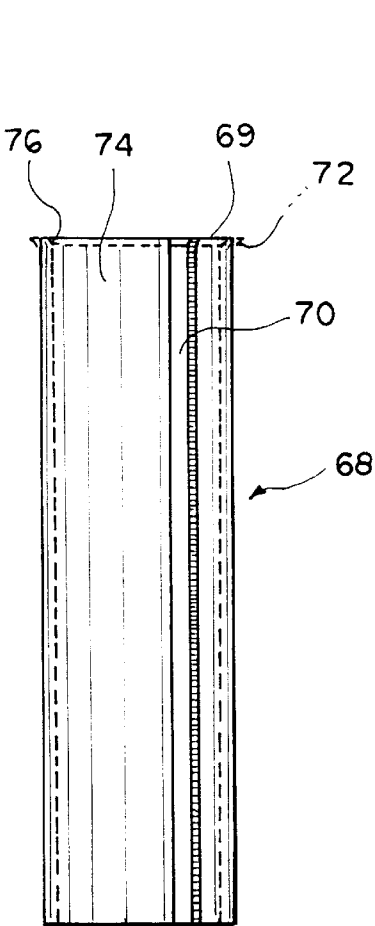


FIG. 4

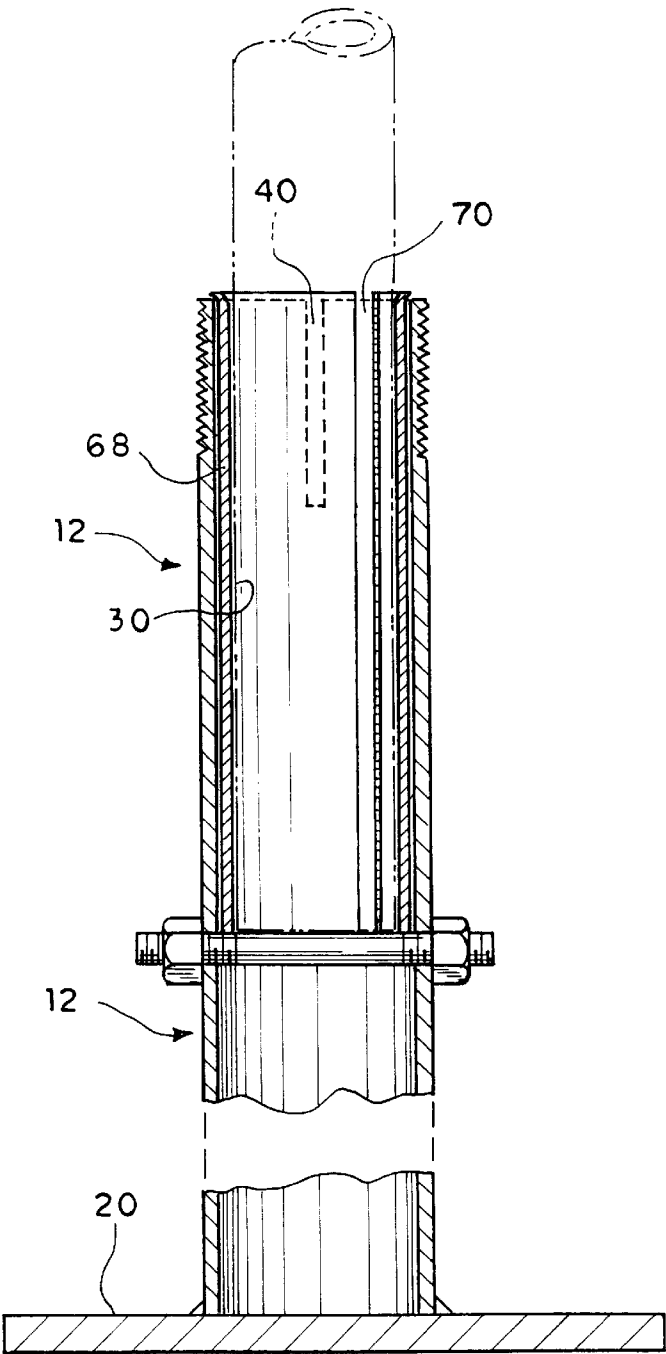


FIG. 5

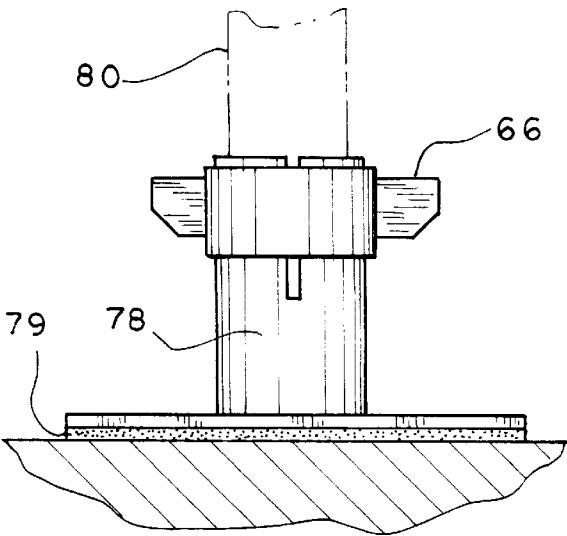


FIG. 6

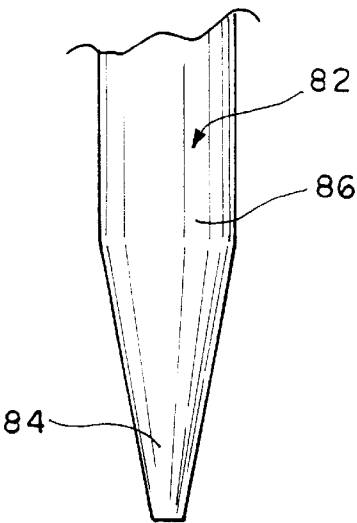


FIG. 7

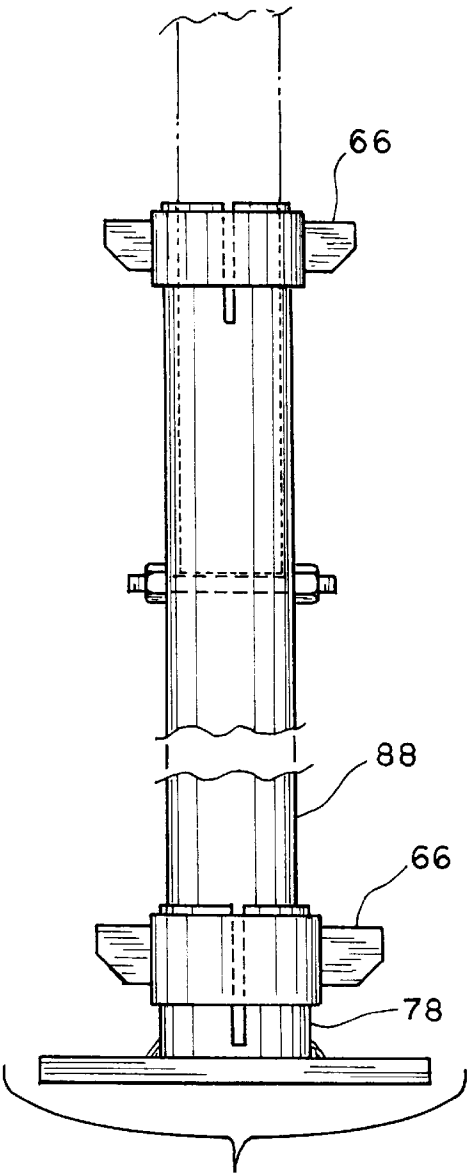


FIG. 8

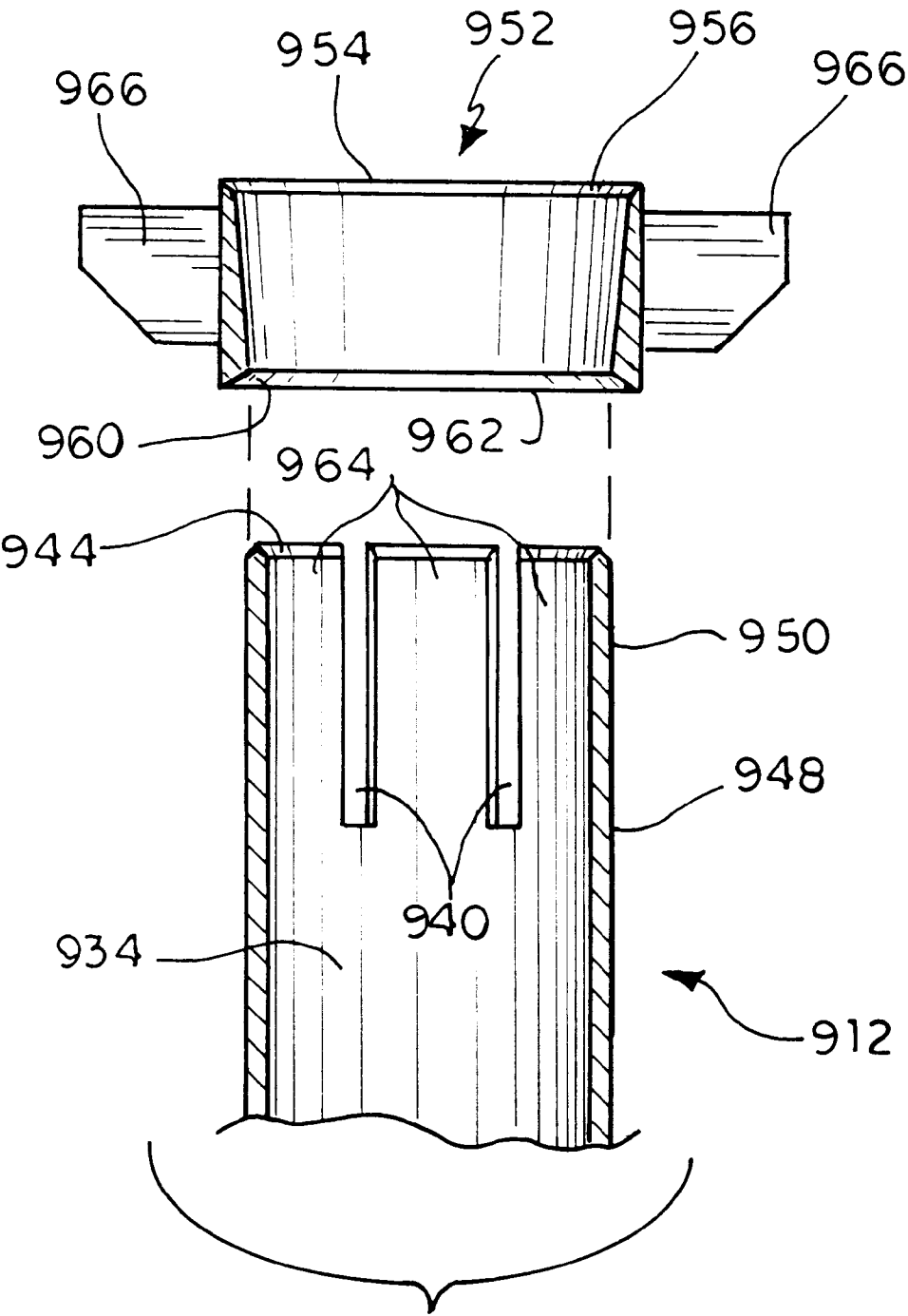


FIG. 9

UNIVERSAL ANCHOR SYSTEM**CROSS REFERENCE TO RELATED APPLICATION**

This application is a continuation-in-part of application Ser. No. 08/700,873, filed Aug. 21, 1996, now abandoned.

BACKGROUND OF THE INVENTION**1. Field of the Invention**

This invention relates generally to anchor systems and, more particularly, to an improved manner of fastening a sign post or the like in a securely supported condition relative an underlying foundation.

2. Description of the Prior Art

It is desired to provide a convenient device to facilitate the mounting of a post or standard in a stationary manner relative to an underlying foundation such as a floor, pavement or the ground. The post or standard may be associated with any of numerous devices for example, flags, signs of any type, fence posts, crowd or traffic control barricades, just to mention a few examples. The most basic technique employed to mount a post is of course to bore or otherwise excavate a hole or opening in the foundation upon which it is desired to mount a post. This procedure is obviously quite labor intensive and is usually utilized only in situations wherein the post is desired to be more or less permanently mounted in any one location. However, in many instances it is desired to only mount a particular post in a temporary situation and wherein it is expected that the post will either be removed or, another post supporting a different sign or the like will be substituted at the same location. When an excavated hole is used in cases as above, often it is necessary to bring special equipment to the scene in order to remove the existing fixed post, and then other preparations may be required when the substituted post is of a greater or lesser cross-sectional mass than the former post.

Many post mounting or attachment systems are known but few offer the adaptability and scale of economy presented by the system of the present invention. To be adaptable, a mounting system should readily accommodate posts of varying diameters as well as alternative lengths without requiring replacement of all its primary components, and should not require any special tools or skill to carry out the attachment of a post therewith. And to be economical, inexpensive components must be called for, without any intricate manufacturing steps being involved.

An early example of a post mounting system will be found in U.S. Pat. No. 1,982,569 issued Nov. 27, 1934, to Byrd, wherein a socket element disposed within the ground receives the lower end of a post, while a two-piece sleeve having a bottom flange portion respectively clampingly engaging an intermediate section of the post, and abuts the top of the buried socket element. The Byrd construction is unlike the instant system wherein a lower most pipe element is provided with an integral configuration allowing of selective radial deflection about an inserted post, upon the manipulation of a separate compression member.

U.S. Pat. No. 2,784,015 issued Mar. 5, 1957, to Swanson illustrates a pole supporting base member wherein a pole inserted within the bore of the base member is retained by means of a plurality of upper and lower wedges respectively and individually drawn together upon the tightening of bolts spanning opposed pairs of the upper and lower wedges. This arrangement is totally dissimilar to the instant construction utilizing an integral compression element operable to apply

a simultaneous, inwardly clamping action upon a plurality of segments at the end of an anchor base.

Another post support will be found in U.S. Pat. No. 3,066,769 issued to Pasquale on Dec. 4, 1962, and although not directed to positive fixation between a post and the support, does depict an example of diametrically opposed wing or fin elements facilitating its use. These wing elements are permanently attached to the support, and serve in this reference as extensions of the support which may be used to drive the support axially into the ground, unlike the present invention wherein wing elements are provided on a separate compression member, and are used to permit rotation of the compression member during its application or removal.

A further example of the use of wedge elements serving to secure a post or the like within a support member is seen in U.S. Pat. No. 3,335,534 issued to Hester et al. on Aug. 15, 1967. A pair of wedge shaped segments cooperate with a fixed circular support base having a tapered socket portion cooperating with the wedge segments to clamp a post there within. This construction departs from that being taught herein and wherein a unitary compression member having a tapered interior portion is applied exteriorly of the top of an anchor base to radially deflect and bias a plurality of segments on the anchor base in clamping engagement with an inserted post.

Another example of camming means employed to secure a pole to a base will be found in U.S. Pat. No. 3,579,936 issued May 25, 1971, to Andersson. In this reference, a concrete base is formed and provided with a socket for receiving a pole which is then retained by a plurality of pairs of camming devices respectively connected together with tie rods. The instant development differs from the above considerably in that no pairs of wedge elements requiring tie rods are involved.

U.S. Pat. No. 4,793,110 issued to Tucker on Dec. 27, 1988 is directed to a building structure and its foundation. A base or socket member embedded in concrete is formed with an inclined side wall and between this wall and an inserted post or column, is disposed a wedge that is driven downwardly to obtain a secure attachment. With the present invention, no separate wedge element is driven between a post and its anchor or socket, but instead, a compression member is applied atop an anchor to produce a radial deflection of split segments on the anchor top into clamping engagement with an inserted post.

French Patent No. 571,895 dated May 26, 1924, depicts a further example of a lower, socket member provided with a bore for receiving a post or pole, and wherein retention is achieved through the use of a plurality of circumferentially spaced wedge elements which are driven into a clamping mode by the manipulation of individual nuts engaging the threads of a bolt. This is contrary to the present arrangement wherein a unitary compression collar serves to deflect a plurality of segments integral with the top of the socket or anchor member.

In French Patent No. 1,058,216 dated Mar. 15, 1954, one elongated member is disposed within a surrounding elongated member and secured thereto through the application of a plurality of wedge elements driven downwardly intermediate the two elongated members and a cooperating outer inclined portion on the surrounding member. This departs from the current system wherein a single outer most compression member provides the sole clamping action to bias the slotted top portion of an anchor member against as inserted pole.

In the case of Swedish Patent No. 191,231 dated Sep. 1, 1964, another example will be seen of a post support including a base member having a socket and within which is disposed a post that is secured through the application of a pair of surrounding wedge elements, all situated within the confines of the socket. Such construction vastly departs from the current construction which involves an outer compression ring serving to radially deflect split segments formed on the upper portion of the anchor member.

Several other references are noted for disclosures teaching signage support structure or mere joint making schemes. U.S. Pat. No. 443,053 issued Dec. 16, 1890, to McCallum, discloses a jointed lamp post. U.S. Pat. No. 1,301,475 issued Apr. 22, 1919, to Mellin, discloses an adjustable gear shift lever. U.S. Pat. No. 1,890,151 issued Dec. 6, 1932, to Hadley, discloses a muffler mounting and exhaust pipe bushing. U.S. Pat. No. 1,938,974 issued Dec. 12, 1933, to Oldberg, discloses a muffler pipe bushing. U.S. Pat. No. 1,974,813 issued Sep. 25, 1934, to Grawoig, discloses a pipe bushing for exhaust systems. U.S. Pat. No. 2,679,911 issued Jun. 1, 1954, to Bhend, discloses a television antenna supporting structure. U.S. Pat. No. 3,119,588 issued Jan. 28, 1964, to Keats, discloses a temporary sign post stand having a weighted type base. U.S. Pat. No. 3,377,765 issued Apr. 16, 1968, to Greeley, discloses a sectional pole antenna. U.S. Pat. No. 3,381,635 issued May 7, 1968, to Pforr, discloses a portable chair having a ground engaging support base. U.S. Pat. No. 3,876,320 issued Apr. 8, 1975, to Phillipson, discloses a fishing rod handle joint. U.S. Pat. No. 3,952,878 issued Apr. 27, 1976, to Gorham, discloses a collapsible gun stand. U.S. Pat. No. 3,969,853 issued Jul. 20, 1976, to Deike, discloses a finned sign post or cable anchor. U.S. Pat. No. 4,543,757 issued Oct. 1, 1985, to Cosgrove, discloses a fence post anchoring support. U.S. Pat. No. 4,785,593 issued Nov. 22, 1988, to Munoz, Jr., discloses a building column support anchor. U.S. Pat. No. 5,163,676 issued Nov. 17, 1992, to Taub, discloses a portable basketball goal and stand. U.S. Pat. No. 5,207,175 issued May 4, 1993, to Andonian, discloses a spring loaded sign post structure. U.S. Pat. No. 5,337,989 issued Aug. 16, 1994, to Apple, discloses a pole stand having a pair of locking pivot arms for securing the assemblage thereof. U.S. Pat. No. 5,540,017 issued Jul. 30, 1996, to Eilam et al., discloses a telescopic flagpole. U.S. Pat. No. 5,571,229 issued Nov. 5, 1996, to Fitzsimmons et al., discloses a ground inserted support structure for poles. French patent document no. 801,895, published Aug. 20, 1936, shows a sectional antenna. British patent document no. 14,210, published Aug. 26, 1893, shows a structure for forming a joint between two tube ends of dissimilar diameter. British patent document no. 16,318, published Jun. 5, 1913, shows a sleeve for maintaining electrical continuity in conductive pipes. British patent document no. 29,174, published Sep. 10, 1898, shows a mechanism for mounting a split pulley on a shaft. British patent document no. 1,575,295, published Sep. 17, 1980, shows an anchor support with a rubber bushing for corrosion prevention. Swiss patent document no. 373,904, published Jan. 31, 1964, shows a telescopic support stand for diverse articles.

None of the above inventions and patents, taken either singly or in any combination, is seen to even remotely suggest or describe the instant invention as claimed herein.

SUMMARY OF THE INVENTION

The anchor system of this invention allows ready adaptation for the securement of poles or posts of varying diameters in numerous situations. A significant attribute is that no initially loose nuts, bolts and wedge members are

involved, thereby obviating the necessity of having to handle and manipulate with a wrench in a coordinated manner, a plurality of fastener elements in order to obtain a pole that is truly axially aligned with its supporting anchor or base.

With the instant system, no excavation of the ground or foundation structure is called for as the anchor member is preferably mounted atop the underlying supporting medium, such as by a transverse base plate, which may assume a variety of peripheral configurations. Alternatively, the base plate may be omitted by forming the anchor member with a lower most drive point. The tubular anchor member includes a series of vertical slots communicating with its upper edge such that a plurality of integral segments are provided. By selecting an anchor member having an internal dimension only slightly larger than that of the intended pole or post, the securing of the pole to the anchor member is achieved through the application of a compression device having a slightly tapered and threaded inner surface. This latter device is applied to the top of the anchor member which is formed with mating threads such that upon application of the compression element, by hand or a suitable simple tool, it may be threaded in place, causing the split segments at the top of the anchor member to radially deflect inwardly. This action produces an extremely tight clamping condition, positively securing the pole in place, in true, vertical alignment with the anchor member.

Alternatively, the threads on the anchor member and compression element may be omitted, with the tapered configuration of the compression element providing a suitable clamping action when driven downwardly onto the anchor member.

It is not necessary to replace any one anchor member when it is desired to install a different pole or post having a smaller cross-sectional dimension, as a split adaptor sleeve is offered, serving to accommodate lesser dimensioned poles. With this adaptation, the adaptor sleeve, which may be provided with a stop formation at its upper end, is slipped down into the top of the anchor member prior to insertion of the pole. Thereafter, the same compression device is applied and simultaneously deflects the anchor member split segments and the intermediate split sleeve as the pole is secured upon the reduction of the inner diameter of the sleeve.

The height and mass of the supported pole often dictates the necessary length or height of the anchor member and accordingly, anchor members of varying lengths may be employed, while additionally, a transverse element may be provided through the bore or socket of the anchor member to serve as a stop defining the limit of insertion of a particular pole. In this manner, a plurality of similar poles or other elongated members may be installed with a certainty of equal pole heights throughout any one project.

The present concept is adaptable to provide barricades or the like as used in traffic marking or along median lines of roadways. During highway construction it is often desirable to have the capability of frequently erecting and changing the location of active signage or markers to safely identify and control the proper traffic lanes during the constantly changing construction procedures. In this respect, it is proposed to utilize an anchor member of minimum height, provided with upper most split segments and externally threaded to accommodate a compression element adapted to secure a pole serving as a traffic marker or barricade. Although galvanized metal is the preferred material for the system components, it will be appreciated that synthetic compositions such as plastics or synthetic rubber may be

employed, especially for highway signage which is most likely to be subject to impact from moving vehicles.

Accordingly, one of the objects of the present invention is to provide an improved anchor system for poles, signs and the like and wherein an anchor member is affixed to an underlying foundation, and includes an upper end provided with a plurality of vertical slots defining peripheral segments about which a compression member is applied to clampingly secure an elongated pole element relative the anchor member.

Another object of the present invention is to provide an improved anchor system for poles, signs and the like including a base element affixed relative a supporting foundation, and having an elongated anchor member attached thereto with a compression device frictionally attached at its top to releasably clamp a pole inserted within the top of the anchor member.

A further object of the present invention is to provide an improved anchor system for poles, signs and the like including a stationary vertical anchor member having a compression device attached at its top for radially deflecting peripheral split segments into locking engagement with an inserted pole, and provided with a transverse stop element in the anchor member defining the limit of insertion of the pole therein.

Still another object of the present invention is to provide an improved anchor system for poles, signs and the like including a vertical anchor member affixed to a foundation and having a tapered compression device threadedly attached at its top, with a split sleeve disposed within the upper portion of the anchor member to accommodate an inserted pole having an outer dimension substantially less than the inner dimension of the anchor member.

These and other objects of the present invention will become readily apparent upon further review of the following specification and appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation of a first embodiment of a sign anchor assembly according to the invention.

FIG. 2 is a side elevation of a second embodiment of a sign anchor assembly according to the invention.

FIG. 3 is an exploded fragmentary cross-sectional view of the compression element and upper portion of the anchor member.

FIG. 4 is a side elevation of a split adaptor sleeve.

FIG. 5 is a fragmentary side elevation of the adaptor sleeve assembled within the anchor tube.

FIG. 6 is side elevation of a third embodiment as used to provide a barricade element.

FIG. 7 is a partial side elevation of an alternative anchor tube adapted to be driven into the foundation structure.

FIG. 8 is a side elevation of a modification employing two compression elements and an intermediate anchor tube.

FIG. 9 is an exploded fragmentary cross-sectional view of the compression element and upper portion of the anchor member according to another preferred embodiment of the invention.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, the present invention will be seen to relate to an anchor system, generally designated

10 and which serves to provide ready means by which any of various types of signs or marker devices may be quickly and easily mounted or erected within different types of environments. The ease by which this signage is achieved is facilitated by employing an elongated anchor tube or member 12 having an interior bore 14, preferably throughout its length. Although a circular member 12 is favored, it will be appreciated that other cross-sectional configurations may be used such as rectangular, polygonal or the like. A square cross-section obviously would be the most appropriate configuration for accommodating wooden sign posts. Various materials may be used in the construction of the components of the current support system. Thin walled galvanized steel or anodized aluminum will be the most popular and economical although other materials may be utilized in certain circumstances as will be described hereinafter.

Referring first to the second embodiment of FIG. 2, the anchor member 12 is intended to be erected with its lower portion 16 suitably mounted juxtaposed an underlying supporting foundation. When such foundation comprises a relative flat, hardened surface, such as pavement 18, erection of the anchor system 10 is most readily accomplished by use of a transverse planar base plate 20 suitable affixed to the tube lower portion 16, such as by the illustrated welding 22. The base plate 20 may define any desired peripheral configuration including rectangular, triangular or the like, and may be secured to the underlying foundation material 18 by appropriate fastener devices 24 installed through openings 26 in the base plate. Such fasteners may comprise any well known devices suitable for the concerned foundation 18, such as expansion bolts, explosively-driven fasteners, etc. Other fastener means will become apparent upon discussion of a further system embodiment later on.

An erected anchor member 12 may define various heights or lengths depending upon the nature of the signage associated therewith. For example, if a relatively lightweight sign 28 needs to be mounted at only a modest height above the foundation 18, then the height of the anchor member 12 need not be extensive. On the other hand, a heavier sign 28 intended to be supported at a height of say, ten or more feet, would necessarily require a longer or higher anchor member to insure adequate stability. In most cases, the height of the anchor member will be selected to accommodate a sign post or pole 30 inserted substantially within the upper one-third of the anchor member's bore 14, as shown in FIG. 2 between the broken lines designating the inner diameter of the wall of the anchor member 12. The diameter or cross-sectional configuration of the bore 14 is preferably selected to slidably accommodate sign poles 30 intended to be most commonly used with any one size of anchor member 12. In this manner, an inserted pole 30 will present a close fit when its lower section 32 is fitted within the anchor member bore 14 as shown in FIG. 2.

The limit of insertion of a sign pole lower section 32 into the upper portion 34 of the anchor member may be defined by including an appropriate stop element such as the transversely disposed stud assembly 36 extending through two diametrically opposed holes 38, 38 in the wall of the anchor member 12. To allow for variation of the height of the stop element 36, alternative pairs of holes 38A, 38A may be provided, as illustrated. Thus, the degree of support for any one sign pole may be determined by the location of the stop or limit element 36 and during the erection of a plurality of signs in any one project, a definite uniformity of signage height will be automatically achieved without having to measure the degree of pole insertion during the assembly of each sign pole 30.

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Another feature of the stop element 36 will be apparent when considering the subsequent application of lock means serving to firmly secure the inserted sign pole 30 in place. The upper portion 34 of the anchor member 12 will be seen to include a plurality of vertical slots or cutouts 40 extending through the top edge 42 of the anchor member. At least two but preferably four of these slots 40 are provided, equispaced from one another, while a chamfer 44 is formed on the inner peripheral surface of the top edge 42 to facilitate the insertion of the sign pole bottom edge 46. As best seen in FIG. 3, the exterior surface 48 of the anchor member 12 will be seen to include external threads 50 adjacent the top edge 42 for the accommodation of a compression element, generally designated 52 and which is constructed to cooperate with the above described thread formation on the upper portion 34 of the anchor member in order to firmly secure an inserted sign pole 30.

As can be best appreciated from FIG. 3, the compression element 52 comprises a circular collar having a slightly tapered central bore 54 adapted to engage the exterior surface 48 of the anchor member and includes internal threads 56 mating with the external threads 50 on the anchor member 12.

During assembly of the signage system, the compression element 52 is slipped about the pole 30 prior to insertion of the pole into the top of the anchor member 12. With the bottom edge 46 of the pole 30 supported upon the stop element 36, the pole and its attached sign 28 are automatically retained at the desired height without requiring any other effort on the part of the installer, thereby freeing the workman's hands for the subsequent final locking operation. The compression element 52 may include an internal chamfer 60 on its lower edge 62 to act as a guide and facilitate the lowering and engagement of the compression element 52 with the top portion 34 of the anchor member 12. As the compression element internal threads 56 engage the anchor member external threads 50, the user rotates the compression element to mate the two threads 50, 56. As the compression element is threaded upon the anchor member top portion 34, the tapered compression element threads 56 produce a radial, inwardly directed deflection of the anchor member segments 64 intermediate the slots 40. Continued tightening of the compression element 52 will be understood to cause the anchor member resilient segments 64 to be firmly urged into engagement with the sign pole 30 thus securely affixing the entire assembly relative the foundation 18. The manipulation of the compression member is enhanced by the inclusion of a pair of diametrically opposed wings or tabs 66. With this construction, a user merely grasps the two tabs 66 to rotate the compression element 52, either during application or removal of the compression element. Obviously, a suitable spanner wrench of known construction may be applied to these tabs 66 when dealing with system components of larger or heavy duty construction and in any case, these tabs 66 may serve as strike elements for any other tool, such as a hammer.

Although the compression element bore 54 is shown with the threads 56 and the anchor member with the threads 50, it will be understood that these threads may be omitted since, in many installations, the tapered bore 54 of the compression element acting on the upper portion 34 of the anchor member 12 provides a tight inward camming action when driven downwardly onto the anchor member.

With the above in mind, it will be appreciated that following the mounting of any one anchor member 12, different signs and poles 28, 30 may be erected and/or exchanged with respect to any one anchor member 12

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merely by manipulating the compression element 52 to allow substitution of an alternate pole and sign, and during which, the replacement pole may be inserted within the anchor member 12 a greater or lesser amount and supported therewithin, by relocating the transverse stud limit assembly 36 through optional pairs of holes 38A.

Provision is made to allow the insertion of sign poles having a smaller cross-section, into any one existing anchor member 12. This is accomplished by the use of an adaptor sleeve 68 as shown in FIGS. 4 and 5, and which comprises an elongated member having a longitudinal cutout 70. The thickness of the split sleeve 68 is selected to compensate for the reduced dimension of a lesser diameter pole 30 when inserted into an anchor member 12. Thus, its outer diameter when at rest is selected to allow a slip fit within the bore 14 of the anchor member while its inner diameter provides a close fit for an inserted sign pole 30. To retain the sleeve 68 when slipped into an anchor member 12, its length may be calculated to extend from the top edge 42 of the anchor member 12 to an installed limit assembly 36. Alternately, the top edge 69 of the split sleeve 68 may be provided with a slightly outwardly rolled lip 72 serving as a limit stop abutting the top edge 42 of the anchor member 12 when slipped into position as in FIG. 5. With this latter arrangement, the adaptor sleeve 68 need not be formed of a length designed to abut the stop assembly 36.

The final assembly of a lesser diameter sign pole when using an adaptor sleeve 68 is similar to that as above described but with the pole 30 being inserted into the bore 74 of the installed sleeve. Thereafter, upon the application of and manipulation of the compression element 52, the split segments 64 of the anchor member upper portion 34 are radially deflected inwardly and simultaneously produce a reduction in the diameter of the captive sleeve adaptor 68 as it is firmly urged into a clamping engagement with the inserted pole 30. The sleeve top edge 69 may be formed with a inner chamfer 76 to facilitate the insertion the a pole 30 into the sleeve bore 74. Additionally, the sleeve top edge 69 may include an outwardly formed lip 72 acting as an automatic stop to limit the insertion of the sleeve into the anchor member 12, in lieu of relying upon its abutment with the transverse stop assembly 36.

The embodiment of FIG. 6 represents an alternative system useful in more than one situation and presents a noticeably shortened anchor member 78 which may be suitably affixed to an underlying foundation 18 by an appropriate base plate 20 as described in reference to the embodiment of FIG. 2. In this latter embodiment, the height of the shortened anchor member 78 is quite minimal and will be found beneficial for either installations calling for relative low signage, or for use with roadway barricades or other traffic marking signage. In such instances, the base plate 20 may be affixed as previously described or alternatively, by suitable adhesive 79, particularly in the case of barricade signage wherein the installation will often be of a temporary nature and the supported elements are of quite nominal height and mass.

In the above respect it will be appreciated that alternative materials may be considered for the construction of the various components of the system. Synthetic plastics and rubber compounds have been known as convenient materials for use as traffic barricades and markers, such as along or adjacent highway medians, particularly in view of the lesser chance of damage to any vehicles should they strike the signage. Accordingly, any or all of the components of the system, particularly as shown in FIG. 6, may be constructed of such non-metallic materials and their assembly will be

understood to be the same as with respect to the previously described embodiments. Thus, the upper portion of the shortened anchor member 78 will be formed to accommodate a compression element 52 to secure either a pole 30 containing a sign 28 thereatop or, a barricade marker tube 80. Obviously, either a sign pole or barricade tube may be treated with a highly visible composition such as reflective paint.

Referring now to the first embodiment of FIG. 1, the anchor member 12 is shown as is expected to be most used in practice and therefore intended to be the preferred embodiment. As can be easily observed, each of the previously described elements of FIG. 2 are provided, but for the transverse planar base plate 20, fasteners 24, and welding 22, unnecessary for securing the anchor member when embedded during conventional construction processes. The anchor member 12 is erected with substantially all of the anchor member 12 embedded in a substantially solid ground material, such as pavement 18, concrete or the like, having its lower portion 16 entirely embedded and its upper portion 34 extending above the surface of the ground material to expose all of the slots 40 and compression element 52. Again, in most cases, the height of the anchor member will be selected to accommodate a sign post or pole 30 inserted substantially within the upper one-third of the anchor member's bore 14. The degree of support for any one sign pole may be determined by the location of the stop or limit element 36 and during the erection of a plurality of signs in any one project. Thus, when embedding the anchor member 12 to uniform level as suggested to be just below the slots 40, a definite uniformity of signage height and security will be automatically achieved without having to measure the degree of pole insertion during the assembly of each sign pole 30.

When the underlying foundation comprises earth, the use of a horizontal base plate 20 to support an anchor member will also not prove feasible. In these instances, an anchor member 82 as shown in FIG. 7 will provide ready means for the support of a signage pole 30. The anchor member 82 will be seen to include a lower most drive point 84. The tapered or conical configuration of the point 82 permits the driving of the anchor member 84 into the earth until the lower portion 86 of the anchor member is embedded a sufficient amount to firmly maintain an attached pole and sign in a stationary vertical position.

In the modification of FIG. 8, a shortened anchor member 12 as used in the embodiment of FIG. 6 is shown, but instead of directly supporting a sign pole 30, an anchor tube 88 is affixed to the anchor member 12 by one of the compression elements 52. The anchor member 12 may be of any desired height according to the length or mass of the separate anchor tube 88 and intended signage and in this instance the anchor member 12 serves as the stabilizing formation for the anchor tube 88. The uppermost anchor tube likewise may be of any desired height, and preferably includes at least one pair of holes 38A, 38A to receive a transverse limit or stop assembly 36. The sign pole 30 is secured in the same manner as described hereabove, through the use of one of the compression elements 52.

In an alternative embodiment, FIG. 9 provides the anchoring system without the need for fabricating extensive thread patterns on the compression element 52, on the inner surface of the collar 54 of FIG. 3. In FIG. 9, the compression element 952 has a circular collar having a slightly tapered central bore 954 adapted to engage the exterior surface 948 of the anchor member and includes internal tapered surface 956 mating with the external flat compression surface 950

on the anchor member 912. The upper portion 934 of the anchor member 912 will be seen to include a plurality of vertical slots or cutouts 940 forming deflectable members 962 at the top edge of the anchor member 912. At least two but preferably four of these slots 940 are provided, equispaced from one another, while a chamfer 944 is formed on the top edge to facilitate the insertion of the sign pole bottom edge 46 and compression element 952.

During assembly of the signage system, the compression element 952 is slipped about the pole 30 prior to insertion of the pole into the top of the anchor member 912. With the bottom edge 46 of the pole 30 supported upon the stop element 36, the pole and its attached sign 28 are automatically retained at the desired height without requiring any other effort on the part of the installer, thereby freeing the workman's hands for the subsequent final locking operation. The compression element 952 may include an internal chamfer 960 on its lower edge 962 to act as a guide and facilitate the lowering and engagement of the compression element 952 with the top portion 934 of the anchor member 912. As the compression element internal tapered surface 956 engages the anchor member external flat compression surface 950, the user impacts (with a hammer, for example) the compression element to mate the two surfaces 950, 956. As the compression element is impacted upon the anchor member top portion 934, the compression element surface 956 produces a radial, inwardly directed deflection of the anchor member segments 964 intermediate the slots 940. Continued tightening of the compression element 952 will be understood to cause the anchor member resilient segments 964 to be firmly urged into engagement with the sign pole 30 thus securely affixing the entire assembly relative the foundation 18. The manipulation of the compression member is enhanced by the inclusion of a pair of diametrically opposed wings or tabs 966. With this construction, a user merely impacts the tops of the two tabs 966 to press the compression element 952, during application or impacts the sides of the two tabs 966 during removal of the compression element. The internal tapered surface 956 of the compression element 952 has a varying diameter. The diameter is slightly less than the outer diameter of the anchor member 948 about the bottom of the element 952. The varying diameter increases to slightly greater than the outer diameter of the anchor member 948 at the top of the element 952. The diameter varies along the tapered surface 956. Obviously, a suitable spanner wrench of known construction may be applied to these tabs 966 when dealing with system components of larger or heavy duty construction. For example, the spanner wrench may be placed about tabs 966, serving as the impact or strike point for a hammer, or other like tool.

The embodiment of FIG. 9, may also utilize an adaptor sleeve as shown in FIGS. 4 and 5, above. In a like manner, the sleeve 68, which may be of metal, plastic, or any other suitable material, is inserted into the top portion of the anchor member 948, forming a smaller diameter receptor for signs posts. The sleeve 68 is compressed about the smaller diameter sign post 30 by the compression element 952 like the threaded version in FIG. 5.

From the foregoing it will be appreciated that an improved pole or signage anchor system is presented accommodating various sizes and types of supported signage.

It will be appreciated that the present invention is not limited to the embodiments described hereinabove, but encompasses any and all embodiments within the scope of the appended claims.

We claim:

- 1. An anchor system for signage comprising:
an elongated sign post having a bottom edge;
an elongated anchor member provided with an interior bore adapted to receive said sign post and having opposite upper and lower portions;
said lower portion being provided with a stabilizing formation adapted to secure said anchor member in a substantially vertical disposition relative a foundation;
said upper portion including deflectable resilient segments;
a stop element disposed within said anchor member interior bore between said upper and lower portions defining an abutment engageable by said sign post bottom edge; and
a compression element engageable with said resilient segments, and operable to radially and inwardly compress said resilient segments about said sign post when inserted within said anchor member bore to fixedly secure said sign post relative said anchor member;
wherein said compression element includes a collar having a smooth internal taper which tapers from a larger diameter near the top of the compression element to a smaller diameter near the bottom of the compression element, said anchor member upper portion is provided with a smooth external flat mating surface for engaging said smooth internal taper of said collar, said compression element collar includes a lower edge having an inwardly directed chamfer, and said anchor member upper portion having a chamfer formed on a top edge of each said deflectable resilient segments.
- 2. An anchor system for signage according to claim 1, wherein said stabilizing formation comprises a horizontally disposed base plate secured to said anchor member lower portion.
- 3. An anchor system for signage according to claim 1, wherein said stabilizing formation comprises a tapered drive point.
- 4. An anchor system for signage according to claim 1, further including;
a top edge on said anchor member upper portion; and
a plurality of substantially vertically arranged slots through said anchor member upper portion communicating with said top edge; whereby
said segments are each defined intermediately of adjacent pairs of said plurality of slots.

- 5. An anchor system for signage according to claim 1, wherein said compression element collar includes a varying tapered internal surface diameter.
- 6. An anchor system for signage according to claim 1, wherein said compression element collar includes outwardly projecting wings to facilitate manipulation of said collar about said anchor member upper portion.
- 7. An anchor system for signage according to claim 1, including:
an adaptor sleeve having an external dimension presenting a close mating fit within said anchor member bore and insertable within said bore of said anchor member upper portion; and
said adaptor sleeve having an internal dimension presenting a close mating fit with said post when inserted within said adaptor sleeve;
whereby a smaller dimensioned post may be inserted within said anchor member bore and be securely supported thereby when said adaptor sleeve is inserted within said anchor member upper portion.
- 8. An anchor system for signage according to claim 7, wherein said adaptor sleeve includes a linear continuous longitudinal slot throughout its extent, whereby a split adaptor sleeve is formed.
- 9. An anchor system for signage according to claim 7, further including:
a top edge on said anchor member upper portion;
a top edge on said adaptor sleeve; and
an outwardly rolled lip on said adaptor sleeve top edge engageable with said anchor member upper portion top edge when said adaptor sleeve is fully inserted within said anchor member bore.
- 10. An anchor system for signage according to claim 1, wherein said anchor member and compression element are constructed of metal.
- 11. An anchor system for signage according to claim 1, wherein said anchor member and compression element are constructed of synthetic material.
- 12. An anchor system for signage according to claim 1, wherein said sign post comprises a cylindrical tube defining a roadway barricade.
- 13. An anchor system for signage according to claim 1, wherein said anchor member includes a pair of diametrically opposed holes intermediate said upper and lower portions, and said stop element includes an elongated member extending between said pair of holes.

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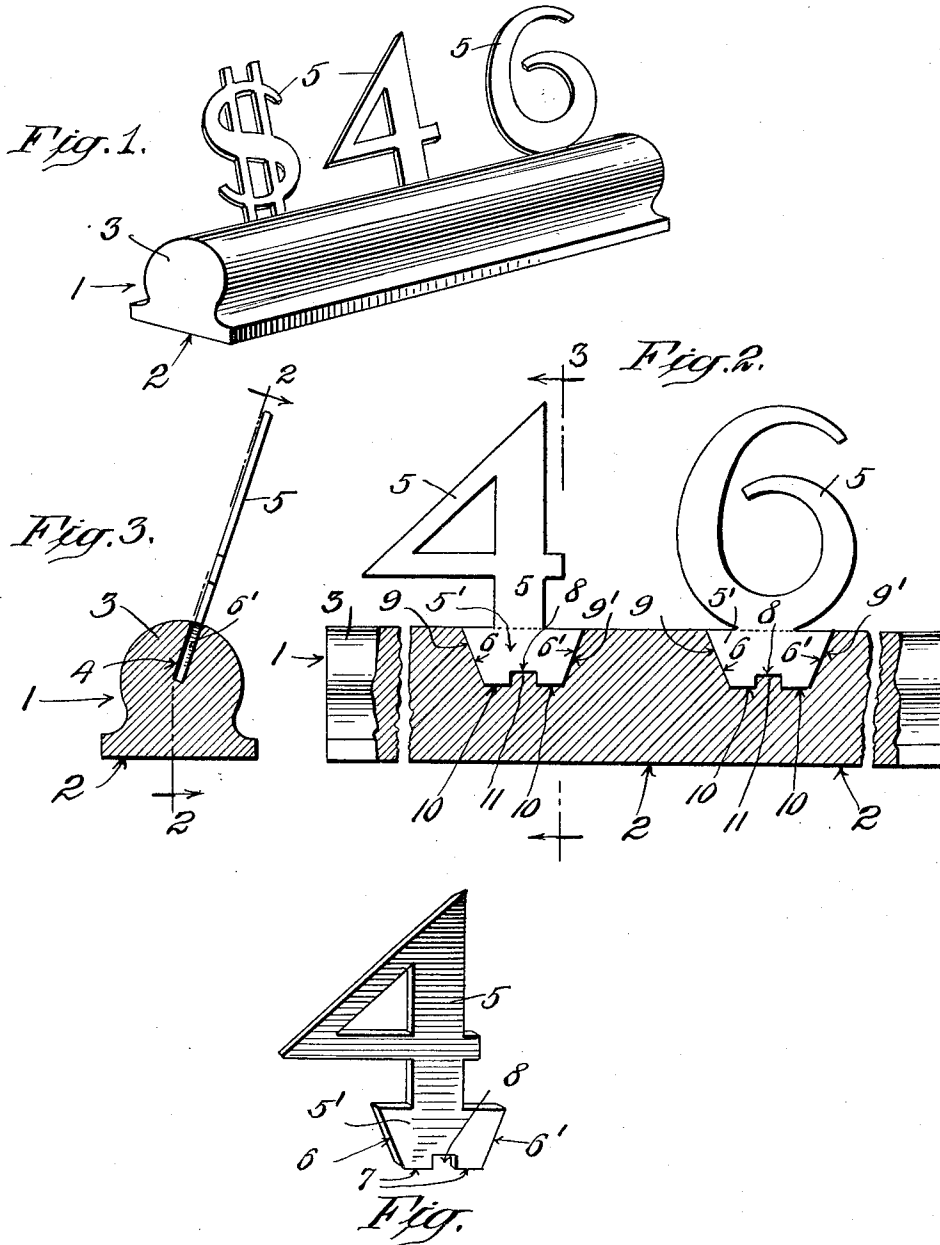
July 26, 1932.

P. PATINOT

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INTERCHANGEABLE CHARACTER OR SYMBOL AND HOLDER THEREFOR

Filed April 22, 1931



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INTERCHANGEABLE CHARACTER OR SYMBOL AND HOLDER THEREFOR

Application filed April 22, 1931. Serial No. 532,005.

This invention relates to improvements in interchangeable characters or symbols and holders therefor.

Among the objects of this invention are to produce an interchangeable character and holder or base member therefor in which the characters, whether numeric or alphabetic, may be properly spaced from each other; to provide a character and holder having interengaging parts; and to provide a character and holder with interengaging means whereby the character will be guided into properly set position in the holder.

With these and other objects in view, the invention comprises the combination of members and arrangement of parts so combined as to co-act and cooperate with each other in the performance of the functions and the accomplishment of the results herein contemplated, and comprises in one of its adaptations the species or preferred form illustrated in the accompanying drawing, in which:—

Fig. 1 is a view, in perspective, of a holder or base member and interchangeable characters mounted therein;

Fig. 2 is a view, partly in side elevation and partly in longitudinal section of the interchangeable character and holder shown in Fig. 1 and illustrating the interengaging feature, the section being taken on the line 2—2 of Fig. 3, looking in the direction of the arrow;

Fig. 3 is a section on the line 3—3 of Fig. 2, looking in the direction of the arrow; and

Fig. 4 is a view, in perspective, of a numeric character removed from the holder.

Referring now to the drawing, which illustrates a preferred embodiment of my invention, 1 indicates a base or holder member having, in the embodiment shown, a flat bottom portion 2 adapted to rest on any flat surface such as the floor or shelves in a show-window and 3 illustrates a raised body portion which may be of any suitable conformation and, as shown, is curvilinear in outline.

In accordance with my invention, the body portion 3 has arranged in a rectilinear line and equally spaced apart a plurality or series of independent grooves 4 adapted to receive

and interengage with a plurality or a series of similarly-shaped foot members 5' of characters or symbols 5.

In the embodiment illustrated, the characters employed are cut out characters or numbers preferably stamped out of metal and provided at their lower ends with the foot pieces 5' having, as illustrated, inclined or downwardly converging edges 6, 6' terminating in flat bottom portions 7 having an interengaging notch 8 while the independent grooves in the base member are provided with upwardly diverging side walls 9, 9' extending from a bottom portion 10 having an upwardly-extending tongue 11, the bottom portions of the groove and number thus being of irregular or broken conformation so as to cause, when the number is placed within the groove, an intermeshing or interengagement between the foot portion of the number and the groove and also to provide at the edges guide portions which will enable the ready and quick mounting of the number and the positioning of the same not only in proper spaced relationship to its companion characters but also to cause the seating in proper upright position without any tilting in relation to the vertical axis passing through the letter.

In the preferred embodiment of my invention, the base member comprises a die-casting in which the independent slots or grooves are formed and the characters or cut-out numerals are stamped out from sheet metal. In view of the use to which these elements are put, both of them are preferably nickel-plated or otherwise ornamented except at the foot portion of the numbers. These foot portions of the characters and the grooves therefor are of suitable thickness and the grooves are preferably depressed in the base member at an angle from the vertical so that the characters when positioned therein will be set at an angle inclined slightly to a vertical plane passing through the middle of the base member.

Obviously a character, such as the number "4" shown may be readily and quickly slipped into the base and will, because of the inclined edges 6 and walls 9, be guided to the bottom portions which will interengage with each other, the portions 7 setting within the por-

tions 10 and the tongue 11 fitting within the groove 8.

Having described my invention, I claim:—

1. An interchangeable character or symbol
5 and holder therefor embodying, in combination, a base member having a body portion provided with a plurality of independent grooves, and characters having foot portions adapted to seat within such independent
10 grooves, said grooves and foot portions of the characters having interengaging portions.

2. An interchangeable character or symbol and holder therefor embodying, in combination, a base member having a body portion
15 provided with a plurality of independent grooves, and characters having foot portions adapted to seat within such independent grooves, said grooves and foot portions of the characters being polygonal in conformation and having inclined edge portions for
20 guiding the movement of the characters into the grooves.

In witness whereof, I have signed my name to the foregoing specification.

25 PHILIPPE PATINOT.

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