United States Patent

Webb

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[54] **SIGN APPARATUS**

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[52] **U.S. Cl.** ..... **40/63,** 40/125 H
[51] **Int. Cl.** **G09f 7/14**
[58] **Field of Search** ..... 40/63, 125 H, 145

[56] **References Cited**

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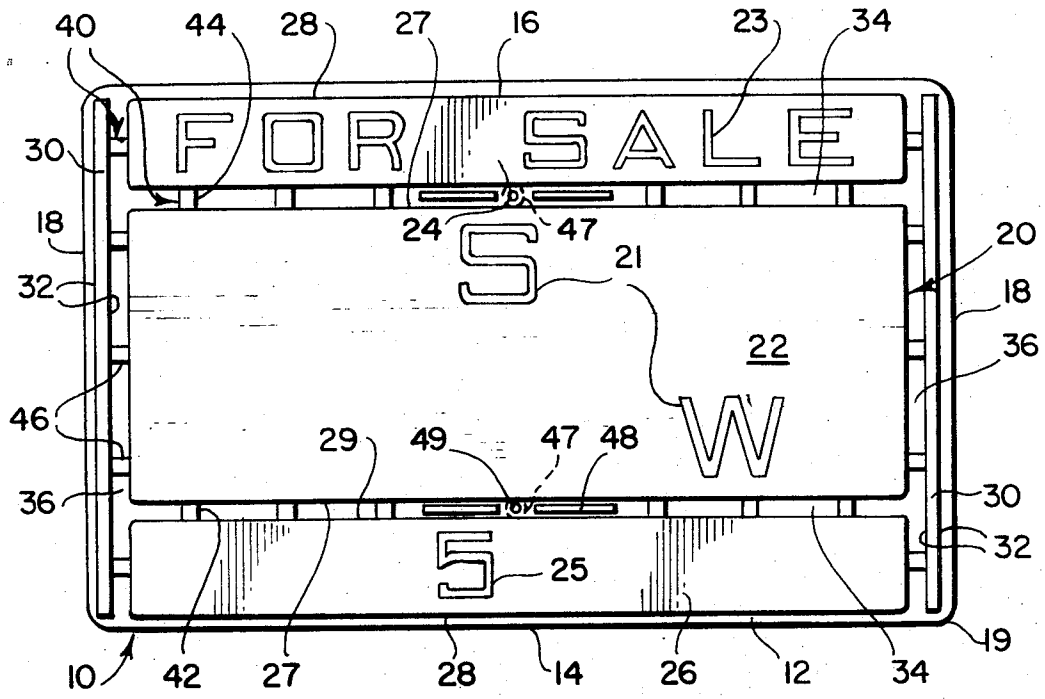
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[57] **ABSTRACT**

A sign is made of a thin relative rigid plastic material which is vacuum formed and which has indicia bearing portions drawn outward from a base and indicia drawn outward from the indicia receiving portion and indicia portions, and by ridges and projected reinforcement portions which extend between spaced indicia bearing portions and between those portions and ridges. A sign post is a square cross section aluminum tube, which fits over a square wooden stake and rests upon the ground.

11 Claims, 5 Drawing Figures



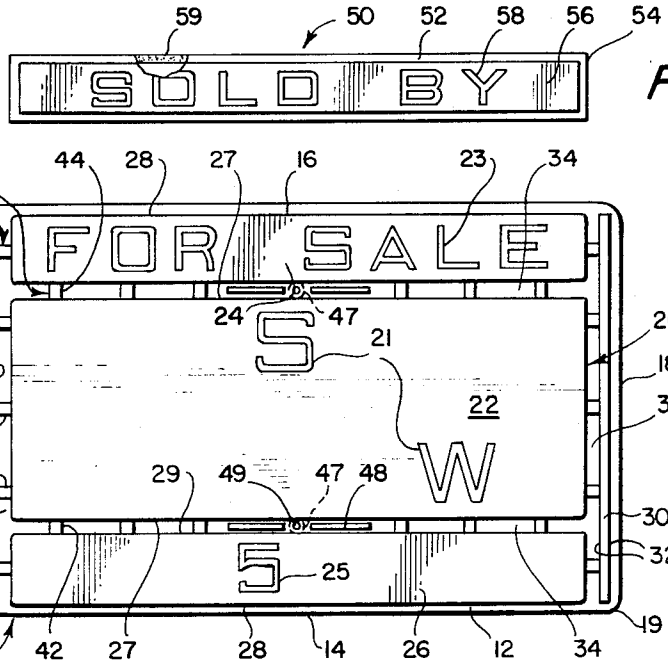


FIG. 2

FIG. 1

FIG. 3

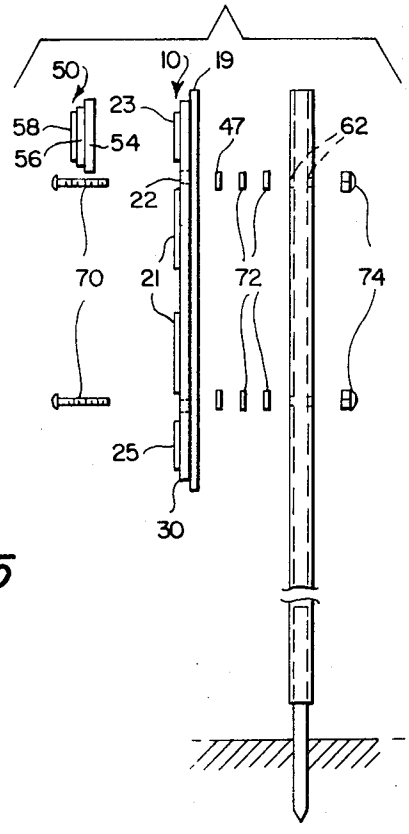
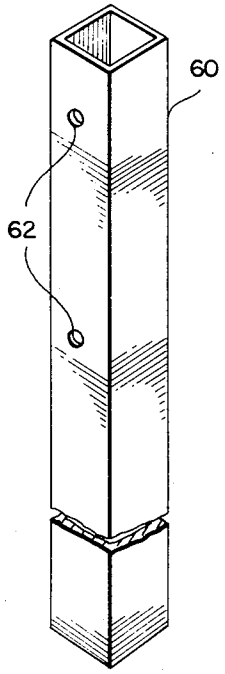


FIG. 5



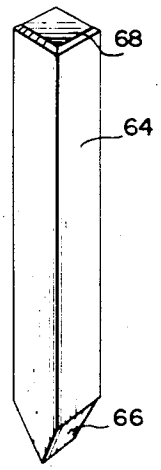


FIG. 4

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SIGN APPARATUS

BACKGROUND OF THE INVENTION

Wide use is made of small relocatable post mounted signs by realtors. The great majority of the real estate agents which carry the signs and install the signs are women. Consequently, it is imperative that signs and posts be as light as possible for ease in installation. Reducing dimensions of signs formed of standard materials is not a proper solution since real estate signs must readily be visible. Indeed, visibility is the purpose of all signs. It is important to make relocatable signs as light as possible in order that a sign which is carried and installed by a single person, usually a woman, may be large enough to be easily read by passersby.

Conventional real estate signs are made of hardboard or of metal having about 16 by 24 inch dimensions. Such signs are heavy or cumbersome, and it is costly to ship a number of such signs. The weight of the signs makes their installation difficult and inconvenient.

Real estate signs are often provided with partially overlapping signs which may be placed over the main signs to indicate that a property has been sold. Often such signs with their small attachments are left on a property for a reasonable amount of time to insure that those who are interested in the property are notified that the property has been sold. Interaction between hardboard sections, such as may be caused by wind, is extremely destructive to the base sign. Metallic signs have similar difficulties with the added drawback that disfiguring rust forms on the exposed surfaces and washes over the face of the signs.

Signs described herein are usually employed with the selling of goods or services, and the reputation of the company which owns the sign as well as the property with which the sign is associated are often influenced by the condition of the signs. Thus, it is necessary to replace, repair or repaint worn or damaged signs. So, susceptibility to wear and to damage is an extremely important characteristic of relocatable signs.

Sign posts are often a neglected part of a sign apparatus. A relatively expensive, new and attractive sign may be hung on a rough lumber stake. Stakes which are finished such as by smoothing and painting may be disfigured by repeated drivings into the ground so that the entire appearance of the sign apparatus is diminished. Solid metallic stakes which are less susceptible to damage are too expensive and heavy to permit their wide use.

Many light sheet material signs have been tried in the past. All have had drawbacks which have prevented their wide acceptance. When sheet material of such signs was rigid, the material usually was expensive, and bending of the sign such as by forces of wind or unintentional contact with the sign would result in eventual cracking or tearing of the sign material and the destruction of the sign. Signs made of flexible material often were destroyed by continued flexing, and the material was not sufficiently strong to enable the use of large unsupported sign areas. Moreover, signs made of flexible material often have an inexpensive appearance. Disfigured signs detract from the goods, services or properties which are advertised by the signs.

Because of the composition of signs and their conventional construction, paints and other coatings which provide the distinguishing indicia have to be placed on the sign boards by complicated processes such as hand lettering, silk screening, or other similarly difficult processes. Moreover, the weight of conventional signs makes their large scale production in a single center and shipment to widespread customers uneconomical. Consequently, signs, and especially outdoor signs, are usually made in local shops.

SUMMARY OF THE INVENTION

The present invention provides light weight signs made of inexpensive material with shape retaining three dimensional forms which impart rigidity of construction and attractiveness of appearance to the signs. Fastening means are integrally formed within the signs for connecting the signs to decorative posts. Posts are uniquely constructed with aluminum tubes having square cross sections. The tubes fit over square wooden stakes which are driven into the ground. Tops of the stakes which may become roughened since they are repeatedly used as driving surfaces are concealed within the tube portions of the posts. Neither are the top portions of the posts disfigured by striking, nor are the lower portions of the tubular posts disfigured by being pushed into the ground. Inexpensive stakes may be replaced after repeated drivings have damaged them; the more expensive posts need not be replaced. Thus, the invention provides complete sign apparatus which includes both attractive and light weight signs and attractive and light weight posts.

The material of which the signs are constructed is a flexible sheet material. While some rigidity is imparted to the sheet material by the construction of interconnected raised surfaces thereon, the final sign products are bendable so that they will not be broken by heavy wind gusts, accidental contacts, unintentional or intentional misuse, or by a long repeated assemblying and disassemblying operations.

Attachments are provided for the signs which consist of separate signs constructed of similar materials and in similar manners as the original signs. The The auxiliary signs have adhesive strips which adhere the auxiliary signs firmly to the base signs. The indicia bearing portions of the auxiliary impressions in the signs are formed so that the sections of the auxiliary signs fit closely over sections of the base signs which assists in the holding together of the portions thereof.

The signs are preferably constructed of calendered vinyl material approximately 0.015 inch thick. The sheets may be cut to size approximately 16 by 24 inches before being placed in vacuum molds which have been blocked out with indicia bearing surface portions, letters and numbers, and reinforcement portions.

In one embodiment of the invention, a 16 by 24 inch sign has a one-quarter rim bent rearwardly around its periphery. Indicia bearing portions are rectangular; each has an approximately 20 inch horizontal length, and each portion is displaced forward from the sign base approximately one-quarter inch. The main or center indicia bearing portion has a vertical dimension of approximately 8 inches, and the top and bottom indicia bearing portions have vertical dimensions of approximately 3 inches. Vertical ridge members approximately one-half inch wide and one-quarter inch deep are spaced from sides of the indicia bearing portions. The ridge members and bearing portions extend for-

ward from the sign base in a direction opposite the peripheral rim. All of those portions are spaced from each other by approximately one-half inch, and the spaces between the portions are generally referred to as the intermediate base portions. One-half inch base area borders remain around the outside of the sign.

In the intermediate base areas, reinforcement portions interconnect walls of the indicia bearing portions and the ridge members. The reinforcements extend approximately one-eighth of an inch forward from the base areas. Holes for mounting the sign on a post are located centrally in the intermediate base areas between the indicia bearing portions. The holes are surrounded by washers, which are bonded to the rear face of the sign. In a preferred embodiment washers are placed in the mold, and washer receiving depressions are molded in the form. Washers are bonded to the depressions before holes are punched or drilled through the sign from the front toward the rear face. Inherent in the molding of the washer receiving depressions is the formation of centering cones which point rearwardly and aid in the positioning of a drill or punch. In a preferred embodiment of the invention, letters extend about one-eighth inch forward from the indicia bearing surfaces.

After the signs have been removed from the molds, entire signs may be painted such as by spraying. Preferably, the plastic sheets have colors and finishes which are suitable for the background areas of the sheets; however, total or selective coating of the sheets may be undertaken before or after molding.

In a preferred form of the invention, the raised letters are coated with paint which firmly adheres to the plastic. Small modified rollers have proved most successful in the letter coating operation. A mask or silk screen may be employed. It is usually most suitable to place the coating on the sign after it has been molded; it is possible using suitable plastics and coatings to silk screen coatings on the signs before molding them.

The letters, being displaced from the surface of the letter-bearing areas, give added strength to the sign. However, the letters may be painted such as by screening on the plane of the indicia bearing portion without surface displacement thereof. As an alternative to the preferred embodiment, the letters may be formed rearward in the signs. In that case, the letter bearing area may be decoratively coated, and The letters may be left uncoated for a unique sign appearance.

Extremely important to the stiffening and durability of the sign are horizontal reinforcement portions which extend laterally outward from mounting holes which are formed centrally in the intermediate base portions. The horizontal reinforcement portions are approximately one-eighth of an inch deep, one-quarter inch wide, and 2 inches long. The main purpose of the horizontal reinforcement portions is to cause the sign to bend in a smooth curve when the sign is stressed by wind, so as not to cause a sharp strain beyond the elastic limit of the material.

One of the most important features of the present sign apparatus is that the signs are completely free to bend and twist and thus are yieldable to forces of weather or of striking either when mounted or when being handled. Signs constructed according to the present invention have proved substantially indestructible when subjected to continuous use, including many relocations and ambient weather conditions including winds up to 50 miles an hour.

The light weight feature of the sign is extremely important because many signs may be made at one location and shipped to users in remote areas. Whereas shipping weights of previous signs created difficult and expensive problems of transportation, the present signs may be packaged readily and may be mailed or shipped to remote points for use. For example, 50 signs of an optimum size as conventionally employed in real estate marketing occupy a package whose net weight is approximately 20 pounds.

The decorative posts of the present invention are formed from square aluminum tubes having exterior cross-sectional dimensions of approximately 1 inch and having wall thicknesses of approximately one-sixteenth inch. Holes which extend through opposite sides are drilled or punched approximately on 9 inch centers near the upper end of the tubes. In a preferred embodiment, holes on opposite sides are equal, and a bolt fastener is secured by a nut. In another embodiment, holes on one side of the tubes may be tapped so that threaded fasteners may be secured therein.

The preferred posts are completed by 2-foot wooden stakes having square cross sections slightly under seven-eighths inch. The stakes have tapered lower ends which terminate in points and relatively flat upper ends with rounded or chamfered edges so that the stakes may be driven into the ground without upsetting the upper edges beyond sizes which easily fit into the tubes. The stakes are driven approximately 1 foot into the ground, and the lower end of the tubes are slid over the exposed upper portion of the stakes. Since the tubes never are driven into the earth, their upper ends remain free of hammer scars, and their lower ends remain free of dirt and scratches. Attractiveness results. It is important that cross sections of the posts be angular, or elongated, to maintain directional stability of the signs. Square tubes and stakes are selected for appearance, strength and ready availability of the materials.

In real estate practice, it is customary to place small signs over larger signs for indications that properties have been sold. The present invention provides sign apparatus which includes large signs and smaller signs to be placed over certain indicia bearing portions of the larger signs. The second, smaller signs are formed of material similar to the first, larger signs.

Bases of the auxiliary signs are of similar dimensions to indicia bearing portions of the large signs, and rearward peripheral rims on the auxiliary signs tightly fit about corresponding walls of those portions of the first signs. Indicia bearing portions of the second signs are formed approximately one-eighth inch outward from their base, and those portions have overall dimensions which fit over letters on the base signs. In turn, letters on the auxillary signs are pressed outward from the indicia bearing portions of the auxiliary signs. Double faced adhesive strips along rear face portions of the bases of the auxiliary signs firmly secure the second signs on the first signs.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation of a first sign of the present invention.

FIG. 2 is the front elevation of a second sign designed for positioning on the first sign.

FIG. 3 is a perspective view of a tubular portion of a sign post of the present invention.

FIG. 4 is a perspective view of a stake portion of a sign post of the present invention.

FIG. 5 is an exploded view of sign apparatus of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring to FIG. 1, a sign is generally indicated by the numeral 10. Sign 10 has a base 12 which has a lower edge 14, an upper edge 16 and side edges 18. A rim 19 is bent rearward around the periphery of base 12.

Raised indicia bearing portions are generally indicated by the numeral 20, and those portions comprise central portion 22, upper portion 24 and lower portion 26. Peripheral walls of the three indicia bearing portions are indicated respectively as 27, 28 and 29. Letters 21, 23 and 25 are formed as raised planar surfaces displaced approximately one-eighth inch from the indicia bearing portions.

Ridge members 30 are formed forward of the base 12 with side sections 32 interconnecting the ridge members 30 and base 12. Intermediate base areas 34 are formed between adjacent indicia bearing portions 20. Further intermediate base portions 36 are formed between portions 20 and ridge members 30.

Reinforcement interconnection portions 40 interconnect adjacent wall sections. For example, reinforcement portions 42 interconnect wall sections 29 and 27 of adjacent indicia bearing portions, and reinforcement portions 44 interconnect wall sections 28 and 27. Reinforcement portions 46 interconnect walls 32 of side ridges 30 with corresponding walls of the indicia bearing portions 20.

Metallic washers 47 are bonded to rear faces of intermediate base portions 34. Stiffening portions 48 extend generally horizontally between apertures 49 and reinforcement portions 40. The stiffening portions 48 insure a curving of sign 10 when it bends, so that it will not bend so sharply and be stressed so severely as to cause it to retain a permanent set.

A second sign apparatus is generally referred to by the numeral 50 in FIG. 2. Overlay sign 50 comprises a base 52 with a peripheral rim 54 being bent rearwardly. Raised indicia bearing portion 56 has letters 58 formed outward therefrom. Adhesive mounting tape 59 on a rear face of base 52, as shown in cut away section, adhere the base to a corresponding sign portion such as indicia receiving portion 24 of the base sign 10. Raised portion 56 of the second sign 50 overlies letters 23 on portion 24 of sign 10.

As shown in FIG. 3, a square aluminum tube 60 has holes 62 drilled therethrough for receiving bolts for holding the sign. In FIG. 4, a square wooden peg 64 is shown. The peg has a sharpened lower end 66 and a beveled upper end 68.

As shown in FIG. 5, stake 64 is first driven into the ground so that half of the stake is exposed. Tube 60 is placed over the exposed end of stake 64, completing the post. Washers 47 are bonded to the rear of sign 10 surrounding and reinforcing apertures 49. Stove bolts 70 are placed through the apertures in the sign 10 and through washers 47 which have been bonded to the rear of the sign. Spacers 72 are provided to allow for the displacement of base 12 from post 60 caused by peripheral rim 19 which is bent rearward from the base. Bolts 70 are then inserted through holes 62 in aluminum tube 60, and cap nuts 74 secure the bolts to the tube. The sign structure is thus completed for use. When it is desired to change the wording on the sign, the auxiliary sign apparatus 50, which is constructed in a manner similar to sign 10, is placed over the upper indicia bearing portion 24 of the main sign 10.

That which is claimed is:

I claim:

1. Sign apparatus comprising a multiple planar matrix-formed three dimensional sign formed from a unitary relatively flexible and moldable sheet material, the sign apparatus having a generally planar vertically oriented base, an edge portion extended rearwardly along a peripheral portion of the base, a plurality of integrally formed spaced apart indicia bearing portions having intermediate base areas therebetween, indicia bearing portions projected forward of the base and forming first wall sections integrally interconnected to the indicia bearing portion and the base and extending rearward from a periphery of the indicia bearing portion to the base, wherein the intermediate base areas have raised reinforcement portions parallel to each other and perpendicular to the said first wall sections and joining the first wall sections and thereby interconnecting the indicia bearing portions, indicia projected outward from the indicia bearing portions and having indicia wall sections extending from the indicia bearing portions to peripheries of the indicia, and mounting means on the base for attachment of the sign to an object.

2. The sign apparatus of claim 1 wherein the reinforcement portions have planar surfaces at a level intermediate the base and the indicia receiving portions.

3. The sign apparatus of claim 1 wherein the intermediate base areas contain the mounting means, and further comprising raised stiffening portions extending along the intermediate base areas from the mounting means toward the reinforcement portions and between the indicia bearing portions.

4. The sign apparatus of claim 1 wherein the indicia bearing portions terminate short of lateral edges of the base, forming lateral base portions along opposite lateral edges of the base, and wherein the sign apparatus further comprises ridge members extended outward from the lateral base portions and terminating near upper and lower edges of the base.

5. Sign apparatus of claim 14 further comprising a single elongated aluminum tube having at a rectangular cross section and having an opening a first longitudinal end thereof, and having bolt receiving holes in lateral portions of the tube near a second longitudinal end thereof, and an elongated stake having a rectangular cross section similar to the tube cross section and slightly smaller than the tube cross section whereby the tube may be slipped over the stake, the stake having a first end configured for penetrating a ground surface and having a second end configured for driving with a weight the second end of the stake and a substantial portion of the stake being inserted in the first end of the tube, and the first end of the tube abutting the ground.

6. Sign apparatus comprising a multiple planar matrix-formed three dimensional sign formed from a unitary relatively flexible and moldable sheet material, the sign apparatus having a generally planar vertically oriented base, and edge portion extended rearwardly along a peripheral portion of the base, a plurality of integrally formed spaced apart indicia bearing portions having intermediate base areas therebetween, indicia bearing portions projected forward of the base and forming first wall sections integrally interconnected to the indicia bearing portion and the base and extending rearward from a periphery of the indicia bearing portion to the base, indicia projected outward from the indicia bearing portions and having indicia wall sections extending from the indicia bearing portions to peripheries of the indicia, and mounting means on the base for attachment of the sign to an object, wherein the mounting means comprises an aperture through an intermediate base area and an annular reinforcing member surrounding the aperture and bonded to a rear face of the intermediate base area.

7. The sign apparatus of claim 6 further comprising fastener means connected to the mounting means and extending rearward therefrom, tubular post means connected to the fastener means and extending downward from the sign, the tubular post means combining an opening in the lower end and separable stake means extending downward from the opening and terminating in a pointed lower end, the stake means extending upward through the opening in the post and terminating in an upper end, whereby the stake means may be driven into the ground prior to the positioning of the post over the stake means.

8. The apparatus of claim 7 wherein the post means is an aluminum tube having a square cross section, and wherein the stake means is a solid wooden stake having a square cross section slightly smaller than internal cross-sectional dimensions of the aluminum tube.

9. Sign apparatus comprising a multiple planar three dimensional sign formed from a unitary relatively flexible and moldable sheet material, the sign apparatus having a generally planar vertically oriented base, an edge portion extended rearwardly along a peripheral portion of the base, integrally formed indicia bearing portion projected forward of the base and forming first wall sections integrally interconnected to the indicia bearing portion and the base and extending rearward from a periphery of the indicia bearing portion to the base, indicia projected outward from the indicia bearing portion and having indicia wall sections extending from the indicia bearing portion to peripheries of the indicia, wherein the indicia bearing portion terminates short of lateral edges of the base, forming lateral base portions along opposite lateral edges of the base, and wherein the sign apparatus further comprises ridge members extended outward from the lateral base portions and terminating near upper and lower edges of the base, rigidifying portions extending forward from the base intermediate the ridge members and the indicia bearing portion, the rigidifying portions being spaced from each other and parallel to each other and terminating in opposite wall sections of the ridge members and the indicia bearing portion, the sign further comprising mounting means on the base for attachment of the sign to an object.

10. The sign apparatus of claim 9 wherein the indicia bearing portion comprises a plurality of spaced apart bearing portions having integrally formed raised intermediate base areas therebetween.

11. Sign apparatus comprising a multiple planar matrix-formed three dimensional sign formed from a unitary relatively flexible and moldable sheet material, the sign apparatus having a generally planar vertically oriented base, an edge portion extended rearwardly along a peripheral portion of the base, integrally formed indicia bearing portion projected forward of the base and forming first wall sections integrally interconnected to the indicia bearing portion and the base and extending rearward from a periphery of the indicia bearing portion to the base, integrally formed indicia projected outward from the indicia bearing portion and having indicia wall sections extending from the indicia bearing portion to peripheries of the indicia, and mounting means comprising adhesive means on rear portions of the base for attaching the rear portion and the sign apparatus to a raised indicia bearing portion of another separate sign apparatus.

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