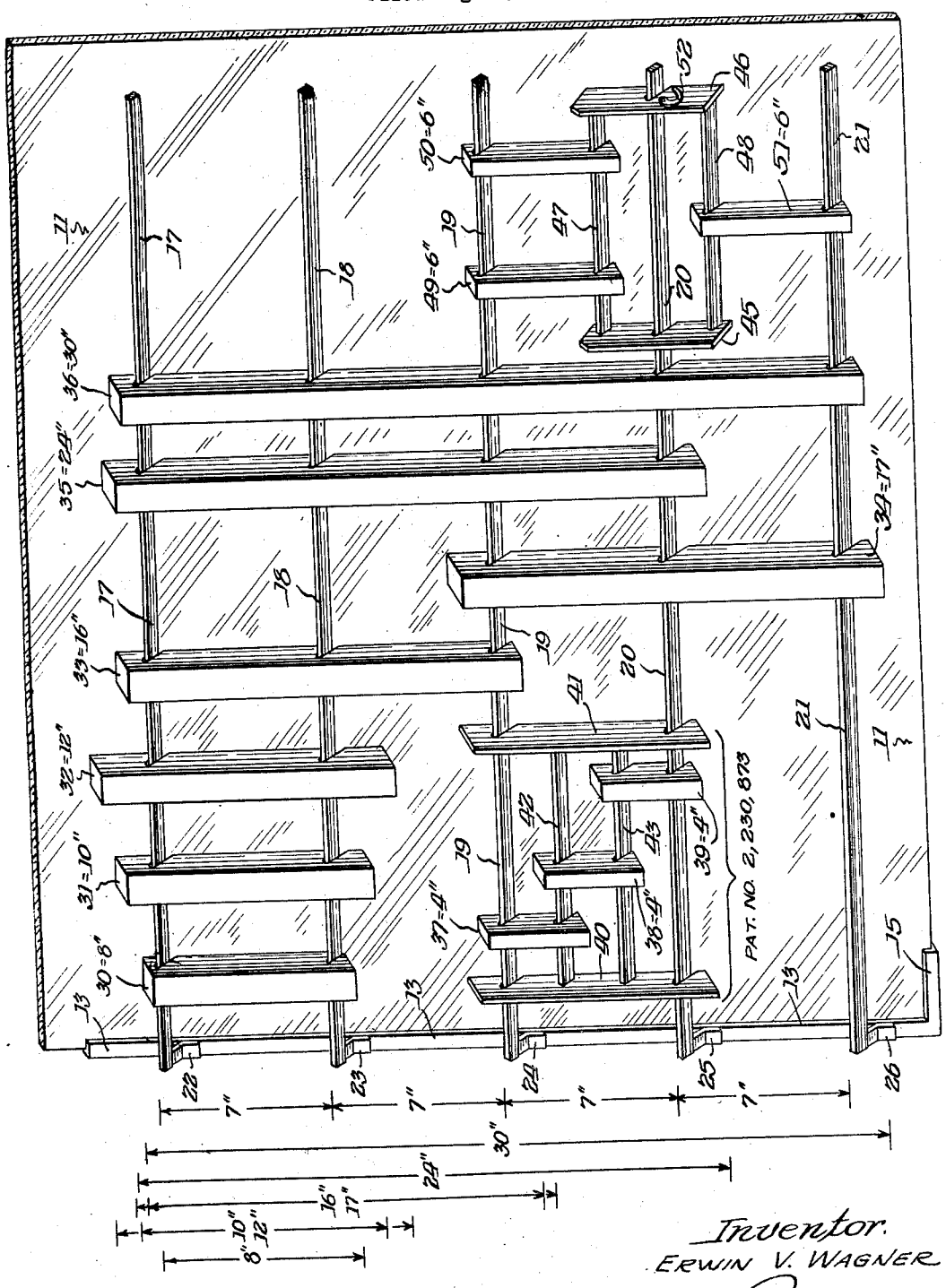
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EXCHANGEABLE DISPLAY SIGN

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EXCHANGEABLE DISPLAY SIGN

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This invention relates to exchangeable display signs of the general type disclosed, for example, in the United States Patents Nos. 2,048,040, 2,119,430, 2,230,873, and is particularly concerned with a sign provided with uniform principal stationary carrier means and with auxiliary carrier means removably disposed upon any one of said principal carrier means for supporting standardized display elements and combinations of standardized display elements of different size and shape in any desired combination.

The term "display element" or equivalent language is intended to include any sign, for example, any letter, figure, numeral, symbol, pictorial representation, etc., disposed respectively for display in combination with other elements to convey a message as, for example, in the case of the so-called exchangeable letter marquee signs widely used in connection with motion picture theaters.

A sign made in accordance with the disclosures contained in the above noted patents comprises a box or receptacle provided at one or more sides with a translucent display panel and carrier means extending horizontally across and in parallel with the panel for removably supporting display elements in front thereof. These carrier means may be simple rods or the like, or channel-shaped members, depending on the particular structure of the display elements. Illuminating means may be disposed within the box for the purpose of illuminating the panel. The display elements may have peripheral flanges provided with inclined notches for engagement with the horizontal rod-like supports, or they may be provided with lug-like top and bottom extensions for engagement with channel-shaped carrier supports. These elements may be arranged on the carrier supports so as to spell out or to convey a desired message appearing against the display panel in bold silhouette outline. The display panel may be made in one piece or in several sections, depending on the size of the sign, an example of the latter sectionalized structure being described in United States Patent No. 2,119,430. Another embodiment of such a sign, that may be mentioned, is described in United States Patent No. 2,224,069, showing a background or display panel which comprises a number of strips or plates horizontally disposed one above the other in a common plane, each strip being provided with an angular forwardly projecting carrier ledge. The ledges are equally spaced from each other and constitute the carrier supports for the sign elements.

It is for reasons of facilitating manufacture, reducing the inventory and for general economy desirable to standardize signs of the type indicated above, that is to say, to standardize the parts of which such signs are made. For example, it has been found that a limited number of display elements (letters, symbols, etc.) of different size (overall length or height) satisfies the needs of the trade and, accordingly, there are now made available display elements of standardized height, measuring respectively 4",6",8",10",12",16",17",24" and 30". The spacing between the principal stationary carrier means (rods or

bars, for example) for the display elements (letters, symbols, etc.) has been standardized and amounts to 7". The width and height of the display panels as well as the number of carrier or supporting rods or bars disposed in front of the panels may vary in accordance with the overall dimensions of a given structure.

The measurements noted above for the height of the display elements and for the spacing between carrier supporting rods or bars are now actually being used; however, it will be clear that different dimensions may be adopted, and it is therefore understood that these dimensions are given by way of example only. The essential thing to be observed is that the industry provides display elements standardized as to a limited number of predetermined sizes and that the spacing between the carrier or supporting rods or bars for the display elements has been standardized to provide for a predetermined uniform spacing.

In accordance with the examples noted herein, the size of the display elements may vary from 4" to 30", that is, the size of the largest 30" display element may be respectively 7.5 times and 5 times the size of the two smallest display elements. However, all the display elements are to be supported upon principal stationary carriers which are uniformly spaced by 7", the amount of such spacing exceeding the dimensions of the display elements measuring respectively 4" and 6" in height. It is clear, therefore, that difficulties appear in providing for the support or mounting of these two relatively small display elements.

In the course of the development and standardization of parts of the display signs, a structure has been produced, disclosed in the previously noted Patent No. 2,230,873, which solves the problem of mounting display elements of the 4" size. The corresponding structure provides an auxiliary carrier for removable mounting upon two selected stationary supporting rods, such carrier forming two further auxiliary carrier rods for disposal between the corresponding two stationary carrier rods. The further carrier rods extend thus relatively stationary within the space between two selected or desired principal stationary rods and in parallel thereto. Display elements of the 4" size may be mounted upon the two further carriers or rods or upon either one of these rods in conjunction with the respectively adjacent principal carrier rod.

The improvement according to the above mentioned Patent No. 2,230,873 extended the utility and versatility of the display signs and advanced the standardization of parts, but left the problem of mounting or supporting display elements of the intermediate 6" size unsolved. Attempts to discard such size failed; the corresponding size (6") seemed to be and still is vitally needed for bridging the size gap between the 4" and 8" display elements. Efforts to provide a solution failed likewise; there seemed to be no way of providing a supporting structure for the intermediate 6" elements that would fit the general sign scheme without detrimentally affecting its appearance which is crucially important for the public appeal of the signs. Accordingly, signs requiring 6" display elements required provision of additional relatively stationary supporting or carrier rods with consequent disturbance of the standard 7" spacing between the principal stationary carriers. The difficulties will be realized when it is considered that 6" display elements may be needed for a given message only along isolated horizontally and vertically spaced areas (horizontal vertically successive lines) of a display sign and that subsequent changes in the message to be conveyed by a sign (for example, according to a change in the program of a theater) may require 6" elements along entirely different sign areas. The provision of additional supporting or carrier rods, aside

from disturbing the standardized uniform 7" spacing between the principal supporting rods, does not give the desired flexibility.

The present invention remedies this drawback by the provision of a simple auxiliary carrier device which may be selectively mounted upon any one of the stationary principal supporting or carrier rods, at any desired place thereof throughout its longitudinal extent, to provide along either side of such principal carrier rod a further carrier rod of limited length, each such further carrier rod forming with the respectively adjacent stationary carrier rod a mounting for a display element or elements of the 6" size. The new auxiliary carrier device may be removably disposed on a sign at any desired place longitudinally and vertically thereof, thus giving with the auxiliary carrier device according to Patent No. 2,230,873 any conceivable latitude and flexibility for assembling messages and adapting the corresponding sign with its standardized parts for the assembly of desired messages to be conveyed, using display elements which are standardized throughout.

It may be mentioned also that there may be provided in addition to the previously noted display elements of the standard size (4" to 30") smaller elements, for example, desired punctuation marks and the like, which may be supported individually upon any stationary standard principal carrier rod or, as desired, upon any carrier rod formed by an auxiliary carrier.

The various objects and features of the invention will appear from the following description which is rendered with reference to the accompanying drawing.

In the drawing, numeral **11** indicates part of a display panel, for example, a translucent glass panel, one edge (left) of the panel being held by a channel-shaped holder **13** having an angular bottom extension **15**. A similar holder (not shown) is provided at the opposite (right) edge of the panel. Numerals **17, 18, 19, 20, 21** indicate stationary principal carriers or supporting rods or bars for display elements to be removably mounted thereon. Each such rod is provided at each end with an extension as respectively indicated at **22, 23, 24, 25** and **26**, such extensions being welded to the corresponding channel-shaped holders such as **13**. The extensions **22** to **26** tilt forwardly to space the carrier rods slightly from the plane of the panel **11**. The carrier or supporting rods **17** to **21** (five rods being assumed to give an example, but more or fewer may be provided) are uniformly spaced by 7". Several such panels may be disposed side by side along one or more sides of an interiorly illuminated boxlike housing (not shown) as described in the previously noted patents. In such structure, the various carrier or supporting rods of the several panels will be in horizontal alignment.

The standard 7" spacing between the supporting rods **7—18, 18—19, 19—20, 20—21** obviously permits removable mounting of display elements of standard sizes. Accordingly, 8" and 10" and 12" display elements indicated respectively at **30, 31, 32**, may be removably mounted on any two of the principal carrier rods; 16" and 17" standard display elements respectively indicated at **33** and **34**, may be removably mounted upon any three of the carrier rods; standard 24" display elements may be similarly mounted upon any four principal carrier or supporting rods as indicated in connection with the display element **35**; and standard 30" display elements may be mounted in like manner upon any five of the principal rods as shown in connection with the display element **36**.

The various display elements **30** to **36**, as far as indicated, and also display elements to be referred to later on, have been shown in the form of elongated bodies simulating the letter "I." It is understood, of course, that this has been done solely for convenience of representation; as explained before, each display element may be in the form of a letter or symbol or pictorial representation and the like. Each element is assumed to be a cross-sectionally channel-shaped body, made as desired, for example, of plastic material or of metal, provided with inclined notches formed in the rearwardly extending walls thereof, for engagement with the corresponding carrier rods as shown.

Display elements of the 4" size, indicated respectively at **37, 38** and **39** are mounted by means of an auxiliary device according to Patent No. 2,230,873. Such device comprises two mounting strips **40, 41** interconnected by auxiliary carriers or supports **42, 43** which are welded thereto. The strips **40, 41** have inclined notches formed therein for mounting engagement at any desired place of a sign, with any desired two principal carrier rods, for example, with the carrier rods **19** and **20** as shown. The device accordingly provides two auxiliary carrier rods for selective disposal between any two of the principal carrier rods along any desired place throughout the longitudinal extent thereof. Display elements such as **37, 38, 39** of the 4" size may be mounted as desired, for example, respectively in engagement with the principal carrier **19** and the auxiliary carrier **42** or in engagement with the two auxiliary carriers **42, 43** or in engagement with the auxiliary carrier **43** and the principal carrier **20**.

The invention contributes to the above explained structure a further auxiliary carrier or supporting device shown at the right-hand bottom section of the drawing, for mounting display elements of the 6" size, thereby making reasonably complete standardization of parts a reality and advancing the flexibility, versatility and utility of exchangeable letter signs to the utmost.

The new auxiliary carrier device comprises two mounting members **45** and **46** provided with inclined notches formed therein for removable attachment to any one selected and desired stationary principal carrier or supporting rod, for example, the rod **20**. The mounting members **45, 46** are interconnected by two auxiliary carriers **47, 48** which may be welded thereto. The new device accordingly provides two auxiliary supporting or carrier rods for disposal respectively within the spaces formed by three selected principal stationary rods or, putting it differently, it provides two auxiliary carrier rods removably mounted upon any one selected principal stationary rod and extending in spaced relation thereto and in parallel therewith along either side thereof. The length of the new device, that is, the length of the rods **47, 48** may vary according to given requirements.

Display elements of the 6" size such, for example, as indicated at **49, 50** may now be removably mounted on the stationary rod **19** and the auxiliary rod **47** and similar 6" elements such as **51** may be supported on the auxiliary rod **48** in conjunction with the principal stationary rod **21**. Any two principal carrier rods form in effect a message line, and the new device permits selective disposal of display elements along any two selected message lines.

Numeral **52** indicates a rotatable, if desired spring-biased latch carried by one or both of the mounting members **45, 46**, for securing the auxiliary carrier device against inadvertent disengagement from the principal carrier rod on which it is mounted.

All display elements have been shown mounted in front of one panel. While this is theoretically feasible, it will rarely occur in practice. The illustration is accordingly a simplified representation; the indicated and further display elements, including those mounted by the use of the auxiliary carriers, and, if desired, additional auxiliary carriers, may be distributed in any desired combinations over a plurality of panels of a sign according to the requirements posed by messages to be conveyed.

Changes may be made within the scope and spirit of the appended claims.

I claim:

1. In combination, a background forming a display surface, cross bars constituting principal carriers mounted in front of said surface in relatively fixed relation there-

to and extending in parallel therewith in mutually uniformly spaced relationship, individual display elements removably supported on said principal carriers, an auxiliary supporting device removably mounted solely upon one principal carrier, said device comprising mounting members engaging said one principal carrier, cross bars constituting auxiliary carriers extending between said mounting members and forming a unit therewith, said auxiliary carriers extending respectively within spaces defined by said one principal carrier and two further principal carriers which extend in parallel therewith and uniformly spaced therefrom, each auxiliary carrier for supporting jointly with the respectively adjacent principal carrier a further individual display element.

2. In combination, a background forming a display surface, cross bars constituting principal carriers mounted in front of said surface in relatively fixed relation thereto and extending in parallel therewith in mutually uniformly spaced relationship, individual display elements removably supported on said principal carriers, an auxiliary supporting device removably mounted solely upon one principal carrier, said device comprising mounting members engaging said one principal carrier, cross bars constituting auxiliary carriers extending between said mounting members and forming a unit therewith, said auxiliary carriers extending respectively within spaces defined by said one principal carrier and two further principal carriers which extend in parallel therewith and uniformly spaced therefrom, each auxiliary carrier for supporting jointly with the respectively adjacent principal carrier a further individual display element of a size which is less than the spacing between said principal carriers.

3. In combination, a background forming a display surface, cross bars constituting principal carriers mounted in front of said surface in relatively fixed relation thereto and extending in parallel therewith in mutually uniformly spaced relationship, individual display elements removably supported on said principal carriers, an auxiliary supporting device removably mounted solely upon one principal carrier, said device comprising mounting members engaging said one principal carrier, cross bars constituting auxiliary carriers extending between said mounting members and forming a unit therewith, said auxiliary carriers extending respectively within spaces defined by said one principal carrier and two further principal carriers which extend in parallel therewith and uniformly spaced therefrom, each auxiliary carrier for supporting jointly with the respectively adjacent principal carrier a further individual display element of a size which is less than the spacing between said principal carriers, and means for securing said auxiliary supporting device in mounting engagement with said one principal carrier.

4. In combination, a background forming a display surface, cross bars constituting principal carriers mounted in front of said surface in relatively fixed relation thereto and extending in parallel therewith in mutually uniformly spaced relationship, any two mutually adjacent principal carriers forming a line for removably supporting desired individual display elements required for conveying a given message, an auxiliary supporting device removably mounted solely upon one principal carrier for supporting further individual display elements included in two successive lines of the message to be conveyed, said device comprising mounting members engaging said one principal carrier, cross bars constituting auxiliary carriers extending between said mounting members and forming a unit therewith, said auxiliary carriers extending respectively within spaces defined by said one principal carrier and two further principal carriers which extend in parallel therewith and uniformly spaced therefrom, each auxiliary carrier for supporting jointly with the respectively adjacent principal carrier a further individual display element of a size which is less than the spacing between said principal carriers, and means for securing said auxiliary supporting device in mounting engagement with said one principal carrier.

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UNITED STATES PATENTS

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