Feb. 5, 1935. H. D. FRANK 1,989,855

KNOCKDOWN SIGN

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Fig. 1

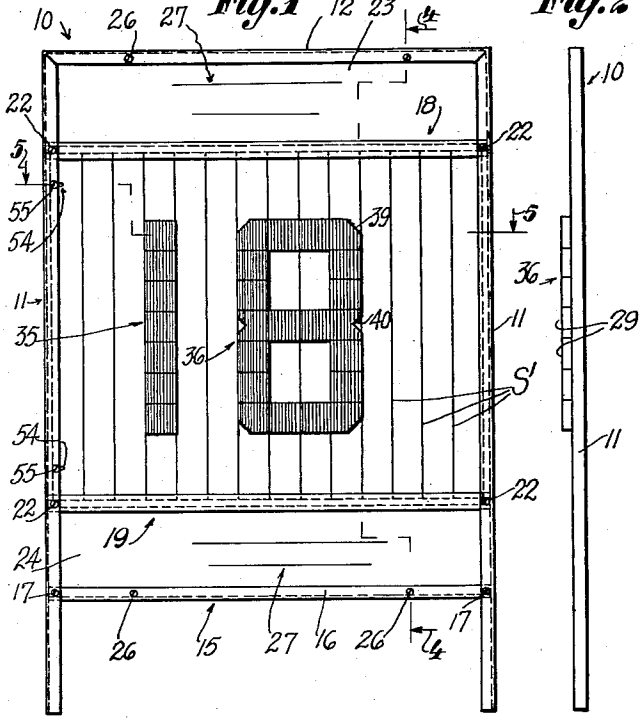


Fig. 2

Fig. 3

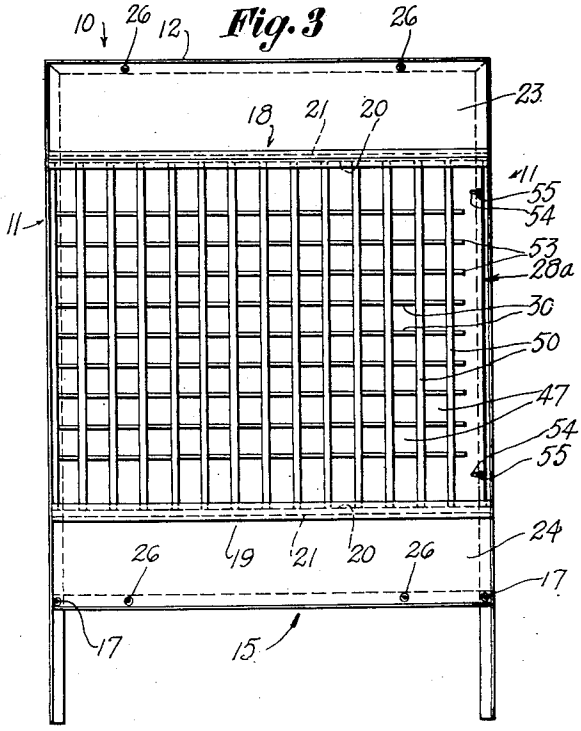
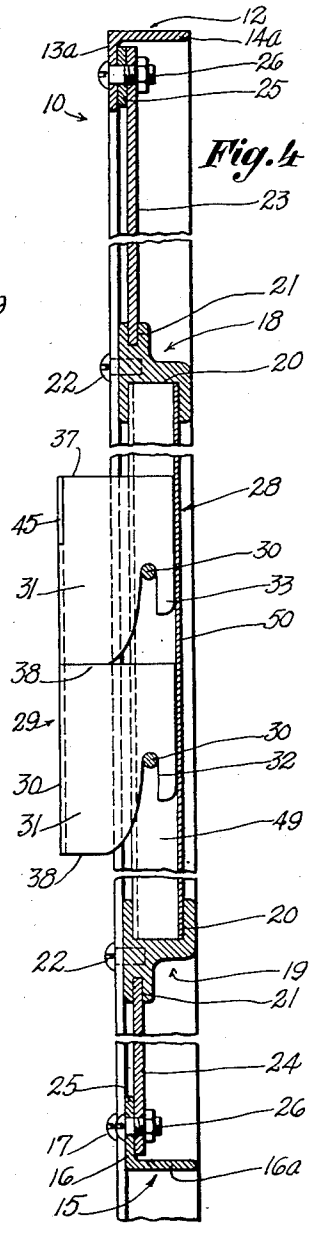


Fig. 4



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Fig. 5

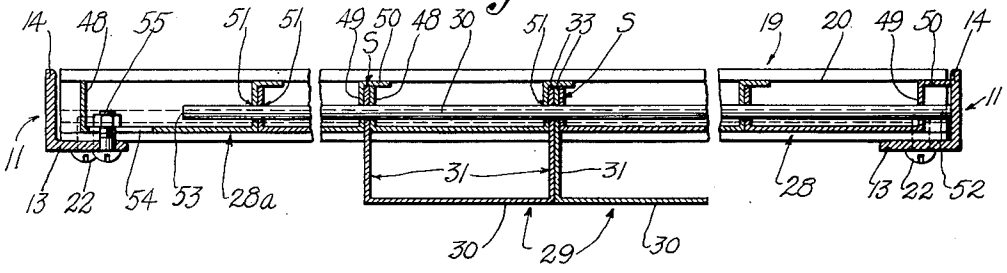


Fig. 6

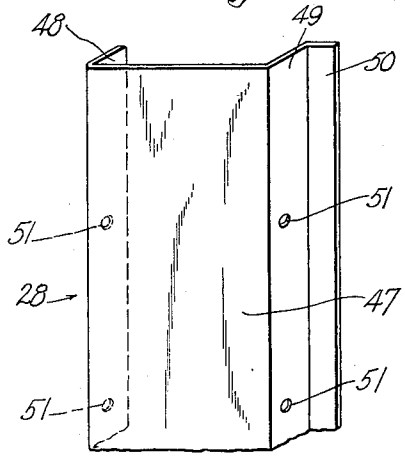


Fig. 7

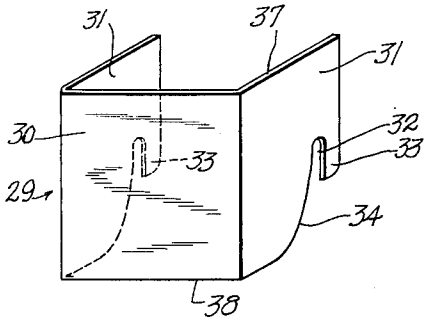


Fig. 8

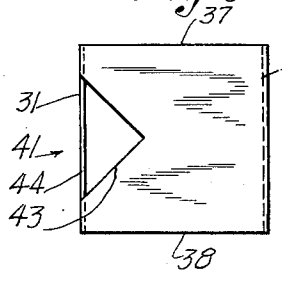
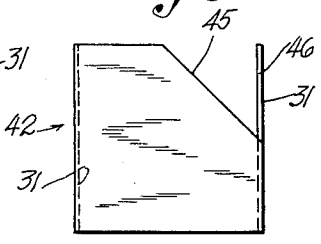


Fig. 9



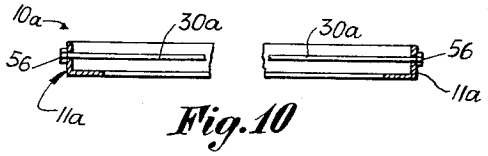


Fig. 10

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Fig. 11

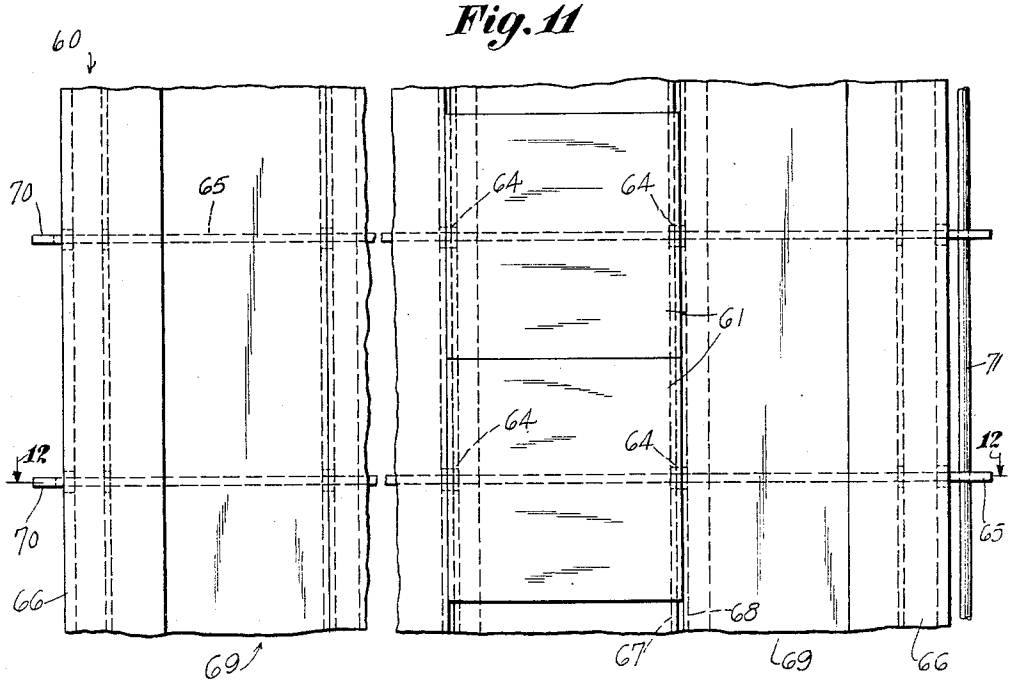


Fig. 12

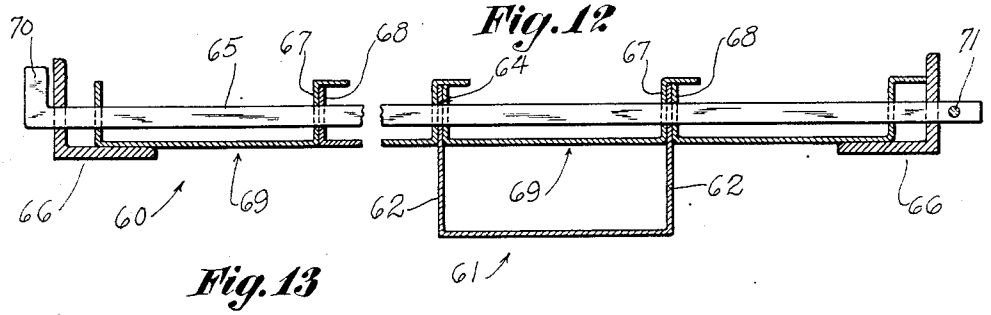
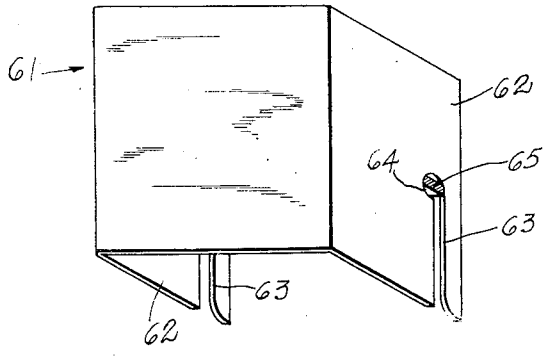


Fig. 13



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1,989,855

UNITED STATES PATENT OFFICE

1,989,855

KNOCKDOWN SIGN

Harry D. Frank, New York, N. Y.

Application January 8, 1934, Serial No. 705,781

16 Claims. (Cl. 40—125)

This invention relates to display signs and has particular reference to knockdown signs.

One object of the invention is to provide a sign having improved means including block-like members whereby any desired indicia can be obtained.

The invention aims particularly to provide a sign which can be shipped in parts and which can be rapidly assembled by any one with ordinary mechanical skill, and which shall replace the paper signs frequently used to announce a change in price of a commodity or other information. It is well known that such paper signs have to be printed, and in the case of large establishments, must be circulated to the points where they are to be displayed, and that they are rapidly destroyed and become unsightly due to wind and weather. By this invention, if the sign be used to designate the price of gasoline, the company supplying this product need merely telephone or otherwise inform its stations of a change in price, and the signs can be reset to immediately announce such change.

Another object of the invention is, therefore, to obviate the defects and to obtain the advantages above mentioned, and further to provide a particularly simple and inexpensive sign structure, and one which is especially clean, neat and attractive in appearance, and which is durable, reliable and efficient in use and convenient to manipulate.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated in the annexed drawings, wherein like parts are designated by the same reference characters throughout the several views.

In the drawings:

Figure 1 is a view in front elevation of a device embodying the invention.

Fig. 2 is a view in edge elevation thereof.

Fig. 3 is a view in rear elevation thereof.

Fig. 4 is an enlarged fragmentary vertical sectional view taken on the broken line 4—4 of Fig. 1.

Fig. 5 is an enlarged fragmentary horizontal sectional view taken on line 5—5 of Fig. 1.

Fig. 6 is an isometric fragmentary view of a channel element.

Fig. 7 is an isometric view of an indicia forming member.

Figs. 8 and 9 are face views of modified indicia forming members.

Fig. 10 is a horizontal sectional view of a modification of the invention.

Fig. 11 is a fragmentary view in front elevation of a further modification of the invention.

Fig. 12 is a sectional view taken on line 12—12 of Fig. 11.

Fig. 13 is an isometric view of a modified indicia forming member.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which the invention appertains, that the same may be incorporated in several different constructions. The accompanying drawings, therefore, are submitted merely as showing the preferred exemplification of the invention.

Referring in detail to the drawings, 10 denotes a display or knockdown sign embodying the invention. The same may include an inverted U-shaped frame of one piece angle iron, having upright members 11 interconnected at the top by a cross member 12. These members thus have flanges such as 13 and 13*a* respectively, lying in a common plane, and flanges such as 14, 14*a* at right angles thereto. Also interconnecting the upright members 11 in spaced relation to the lower ends thereof is an angle member 15 having a flange 16 connected to the flanges 13 as by bolts 17 and having a bottom flange 16*a* at right angles thereto. Additionally interconnecting the upright members 11 are vertically spaced cross bars 18 and 19 which are located between the cross members 12 and 15 in spaced relation but in relative proximity thereto. Each of the members 18, 19 is a duplicate of the other, and one of them is inverted relatively to the other. Thus each of the members 18 and 19 may be of somewhat deformed H-shape in cross section, having along one side a relatively wide channel 20 and at its opposite side a relatively narrow channel 21, the respective channels 20 and 21 of the members lying in common planes, and the channels 20 facing each other, while the channels 21 face their adjacent angle members 12 and 15. These cross bars 18 and 19 lie between the flanges 14 of the upright members 11 and are connected as by screws 22 to the flanges 13 of the upright members.

Fitted in the grooves 21 and extending back of and along the flanges 13, 13*a* and 16 of the

adjacent frame parts are rectangular plates such as 23, 24, which may be spaced therefrom as by washers 25 and connected to the flanges 13*a* and 16 as by bolts 26. The plates 23, 24 thus reenforce the frame and are particularly intended to carry permanent indicia painted, impressed, imprinted or otherwise disposed thereon, as indicated at 27.

Fitted in the channels 20 are a plurality of upright separate elements such as 28 adapted to engage therebetween block-like indicia forming members 29, which are detachably connected to horizontal cross rods 30, that are individually releasably attached to the different elements. The arrangement may be best understood by first describing the members 29.

Each of the members 29 consists of a piece of sheet metal pressed into channel form, so as to have a front or display face portion 30 and side flanges 31 at right angles thereto. The portion 30 may be of square or other suitable shape and the flanges 31 may be of substantial depth and may each be provided with securing means such as recesses 32 formed by tongues 33 at the cut away lower corner portions 34 of the flanges, whereby entrances are afforded to the slots and the latter are located substantially centrally between the upper and lower edges of the members.

The members 29 may be variously interchangeably arranged in different positions and relationships to afford any desired numeral, letter, indicia or legend, as shown for example, at 35, 36 in Fig. 1. Preferably the members 29 are arranged with their channels vertically disposed and with their upper and lower edges 37, 38 respectively abutting each other in their planes. The front faces 30 of the members may have any suitable color, such as red, and in order to better illustrate a desired character, certain of the members may have cut away portions as shown at 39, 40 in Fig. 1, but preferably as illustrated by members 41, 42. Thus the member 41 may have a lateral central V-shaped cut out 43 in the face portion thereof, up to the adjacent side flange 31 thereof and leaving the latter entirely intact up to the plane of the face portion, as indicated by the edge 44 of said flange. Likewise the member 42 may have a corner 45 cut away in the face portion, this cut away extending along the plane of the face portion past the adjacent flange 31, forming the edge 46 in the latter. The nature of the construction, generally similar for both 41 and 42, is well shown in Fig. 4, the flanges 31 being otherwise exactly the same as in the member 29.

Each of the elements 28 is of vertically elongated channel form and includes a back 47 and side flanges 48, 49, the latter flange having in turn a laterally extending longitudinal lip or flange 50 which may be parallel to the back 47. The flanges 48, 49 may have a series of oppositely disposed alined holes 51, for a purpose hereinafter described. It will be noted that the outside width of an element 28 is such that the member 29 may closely embrace the same, so that the flanges 31 slidingly engage along the outside of the flanges 48, 49. The vertical spacing of the holes 51 may be equal to the height or distance between the upper and lower edges 37, 38 of the member 29.

The elements 28 are adapted to lie with their backs 47 in a common plane, side by side, and with a flange 50 of one member overlapping an adjacent flange 48 of an adjoining element 28 as clearly shown in Fig. 5. It is thus noted that thereby are formed vertical narrow channel spaces S, which may receive the flanges 31 therein, and which are further adjustable to snugly engage or frictionally grip said flanges, as hereinafter described.

Extending through all alined holes 51 of the elements 28 is a guide or rod 30, and a series of such rods are provided to pass through all the vertically spaced holes, whereby the rods are equally vertically spaced, and reenforce the elements 28 and support the same. These rods necessarily span the channel spaces S, and the flanges 31 are arranged so that the tongues 33 hook over the rods, the latter being received in the slots 32.

One end 52 of the rods 30 may abut one of the flanges 14, and the other end 53 of said rods may lie in spaced relation to the opposite flange 14. Preferably the elements 28 are disposed so that a flange 48 lies in proximity to the last mentioned flange, and such element 28*a* may differ from that at 28 solely in having horizontally elongated slots 54 whereby the element 28*a* may be adjustably secured to the adjacent flange 13 by bolts 55. It will now be seen that the elements 28 and 28*a* may be moved transversely along the rods 30 to leave sufficient space at S for the mounting of the members 29, after which said elements may be moved closely toward each other, toward the right in Fig. 5, and the bolts 55 tightened.

Obviously any number of elements 28 and rods 30 may be used, and desirably the uppermost and lowermost rods are spaced further from their adjacent cross bars 18, 19 than from each other. The cross bars 18, 19 may be omitted if desired, as shown by the modification 10*a* of Fig. 10, and the guide rods 30*a* may be passed through alined holes in the upright members 11*a* of the fame, and secured at their ends outside of the frame as by nuts 56. In this arrangement the elements 28, 28*a* may thus be carried wholly by said rods, and the construction may otherwise be the same as in the device 10, as the elements 28, 28*a* may merely abut the adjacent edges of the plates 23, 24.

The manner of assembling the device will now be described. The frame having the cross members 15 and 19 secured thereto as shown, the elements 28, 28*a* are assembled as on a table and the rods 30 passed therethrough. Then this assembly is bodily inserted into the channel 20 of the member 19, and swung into the frame, after which the bar 18 is connected in place. Finally, the plates 23, 24 are attached.

In use, the members 29 are individually connected, their flanges 31 being inserted between the loose elements 28, and hooked to the rods 30, in which position the flanges 31 may abut the flanges 50 for steadying the members, and the front portions 30 being spaced in front of the backs 47 of the channel elements 28. In this way, any desired indicia can be rapidly built up or changed as may be necessary. When this operation is completed, the elements 28, 28*a* are all moved laterally, and the bolts 55 tightened, whereby the sign is completely set up. The sign can be readily knocked down in the reverse manner.

The appearance of the sign is an extremely important factor of the invention. The front of the sign is marked by uniformly spaced vertical lines S' that are relatively inconspicuous since the spaces S are very narrow. The indicia forming members neatly conform to each other and are symmetrical with the lines S', and stand

out from the background of the back portions 47 of the elements. There are no daylight spaces through the signs, in view of the rear flanges 50 at the spaces S. The rods 30 are wholly at the back of the sign, and provide a neat appearing regular formation with the flanges 50. The sign can be readily cleaned or washed, and since the members 29 are vertical and provide vertical unobstructed channels with thin edges, dust and other foreign matter substantially will not readily settle or accumulate on the indicia. Each member 29 may of course carry a complete letter or numeral so that a series of members can be used to form a word or other indicia.

In Figs. 11 to 13 is shown a modification of the invention including a sign 60 which is precisely similar to the device 10, except that the indicia forming members may be releasably locked against unauthorized removal, and that the channel members 18, 19 are removed, as explained for the device 10*a*. Also, as shown in the device 10*a*, the rods are extended through the frame.

More specifically, the indicia forming members 61 have their side flanges 62 provided with open ended upright slots 63, the closed ends whereof are enlarged as at 64, so that the rods 65, which are oblong in cross section, may be readily received in the slots through the open ends thereof, and then rotated through an angle of 90 degrees in the enlargement 64 to afford an interlock. Each of the rods 65 passes through holes in the parallel flanges of the upright frame member 66 and through the parallel flanges 67, 68 of the channel elements 69, these holes being, for instance, round to permit turning of the rods as above set forth. Each of the rods has a head or handle 70 at one end, and at its other end a hole whereby a pin 71 may be passed through all the rods to prevent reverse turning and unlocking of the rods. In operation, after members 61 are assembled and elements 69 locked as at 54, 55, the rods 65 are turned and the pin 71 inserted to lock the same.

It will be appreciated that various changes and modifications may be made in the device as shown in the drawings, and that the same is submitted in an illustrative and not in a limiting sense, the scope of the invention being defined in the following claims.

I claim:

1. A knockdown sign including an indicia providing member of sheet material of generally channel form, the flanges of the channel having open ended slots, and means for supporting the member including means releasably engaged in said slots.

2. A knockdown sign including a plurality of elongated elements in relatively close side by side relation, engagement means between the elements, and indicia forming members having portions insertable between the elements, and said portions having open ended slots for releasable engagement with said means.

3. A knockdown sign including a plurality of elongated elements disposed in parallel side by side relation to each other and movable toward and way from each other, said elements having their front faces lying in a plane, a plurality of indicia forming members having rearward projecting portions received between said elements, said portions having open ended slots, means for releasably engaging in said slots, said means being positioned rearward of said plane.

4. A knockdown sign including a plurality of elongated elements disposed in parallel side by side relation to afford a front surface and being movable toward and away from each other along said surface, a plurality of members having indicia forming portions in front of said surface and rearward extending portions inserted between said elements, said portions having open ended slots, means providing engagement portions between the elements and releasably engaged in the slots, said engagement portions being spaced at fixed distances apart along the elements and being adapted to support the members, and means for locking the elements against movement after the elements have been moved toward each other.

5. A knockdown sign having means including a plurality of parallel elements lying in and movable toward and away from each other along a plane, indicia forming members having projections received between the elements, said means including portions for releasable engagement with said projections, said portions being spaced at fixed distances apart along the elements, and means for securing the elements against movement.

6. A sign including a plurality of members adapted to be variously arranged to provide an indicia with each other, and means for supporting the members in indicia forming position, said means including a plurality of spaced parallel flat rods, and the members having means provided with open ended key hole slots for releasably engaging said rods, and said rods being rotatable for interlocking with the means of said members.

7. A sign including a plurality of members adapted to form different indicia, said members having rearward extending portions, and means for supporting the members in indicia forming position, said means including a series of elongated separate elements disposed side by side for engaging therebetween said portions, with said members being disposed in front of the elements, certain of said elements having longitudinal flanges at the rear thereof for underlying adjacent longitudinal edges of said elements, and means for holding said elements in the side by side position.

8. A sign including a plurality of members adapted to be arranged to form indicia, and means for supporting the members in different positions to form said indicia, said means including two series of interengaged spaced elements crossing each other, the first series of elements supporting the members, and the other series of elements being individually movable and engaging the members therebetween for spacing the members along the first series of elements.

9. A sign including a series of separate elongated elements of equal width disposed edge to edge alongside of each other, a series of frame rods transverse of said elements and interconnecting the same, said elements being adapted to afford narrow parallel spaces therebetween, said rods being uniformly spaced with respect to each other and extending across said spaces at one side of said elements, and interchangeable members adapted to form different indicia on the opposite side of said elements and having portions entered into said spaces for releasably engaging said rods to secure and support the members.

10. A sign including a series of separate elongated elements of equal width disposed edge to edge alongside of each other, a series of frame rods transverse of said elements and intercon-

necting the same, said elements being adapted to afford narrow parallel spaces therebetween, said rods being uniformly spaced with respect to each other and extending across said spaces at one side of said elements, and interchangeable members adapted to form different indicia on the opposite side of said elements and each being of a width substantially equal to that of one of said elements and having a pair of spaced portions entered into said spaces for releasably engaging said rods to secure the members in indicia forming positions.

11. A sign including a plurality of elongated separate spacer bars disposed side by side, a plurality of transverse bracing cross rods interconnecting the same, and indicia forming members detachably connected with the rods in spaces between said bars.

12. A sign including means providing a series of parallel equally spaced longitudinal spaces, and transverse brace rods reenforcing said means and bridging said spaces, said rods being equally distant from each other, and indicia forming members detachably connected with said rods within said spaces.

13. A sign having means providing equally spaced channels, rods transverse of said means and extending through said channels, and indicia forming members having portions extending into said channels and connected to said rods.

14. A sign having means having openings, rods lying mainly on one side of said means, and indicia forming members on the opposite side of said means, said members having portions extended into said openings, said portions having openings for hooking engagement over said rods.

15. A sign having interchangeable indicia forming members adapted to be mounted in different relationships to provide different legends, and means for mounting said members including continuous means movable for detachable connection with the members to prevent movement thereof in one direction from the predetermined relations, and other means having engagement with the members to prevent movement thereof in a direction at an angle to that first mentioned.

16. A sign having interchangeable indicia forming members adapted to be mounted in different relationships to provide different legends, said members having portions provided with openings, and means for mounting said members including means having detachable connection with the members in said openings thereof to prevent movement of the members in one direction from the predetermined relations, and other means having engagement with the members to prevent movement thereof in a direction at an angle to that first mentioned.

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