United States Patent [19]

Hunter, Jr.

[11] **3,919,794**

[45] **Nov. 18, 1975**

[54] **MULTIPLE MESSAGE SIGN APPARATUS**

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[22] Filed: **Sept. 21, 1973**

[21] Appl. No.: **399,537**

[52] **U.S. Cl.** **40/30**; 40/77.7; 40/77

[51] **Int. Cl.**[2] **G09F 11/00**

[58] **Field of Search** 40/77.4, 77.6, 77.7, 33, 40/30, 77

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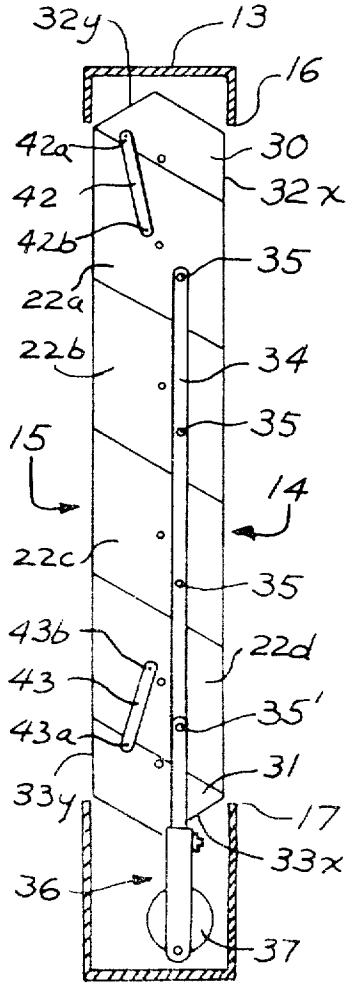
Primary Examiner—John H. Wolff
Attorney, Agent, or Firm—Jones, Thomas & Askew

[57] **ABSTRACT**

A signboard having a pair of opposed message viewing faces and containing a first pair and a second pair of separate and independent messages, with the capability of concurrently displaying one message of the first pair through one viewing face and the other message of the first pair through the other viewing face, then concurrently substituting and displaying the second pair of messages through the viewing faces in a similar manner so that on a sequential basis one message from the first pair and one message from the second pair are alternately displayed through one viewing face and the other two messages are displayed in a similar manner through the other viewing face. The messages are made up of message segments disposed on the surfaces of an array of parallelogram prism message support members mounted within the sign frame for oscillation in unison between first and second viewing positions. Gaps otherwise present in the displayed message, resulting from the offset of the parallelogram sides relative to the axes of rotation of the message support members, are avoided through the provision of a pair of end members containing surface portions which selectively occupy the gaps in the viewing faces.

9 Claims, 12 Drawing Figures



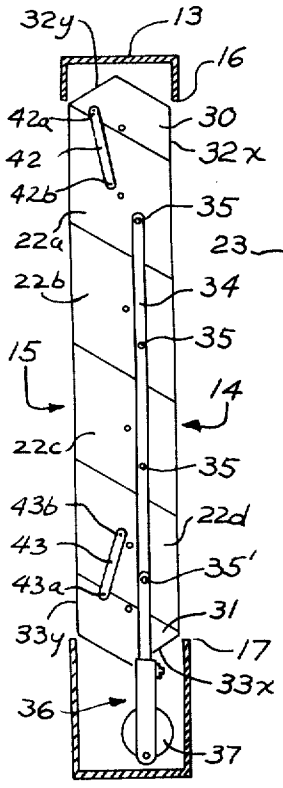


FIG. 2

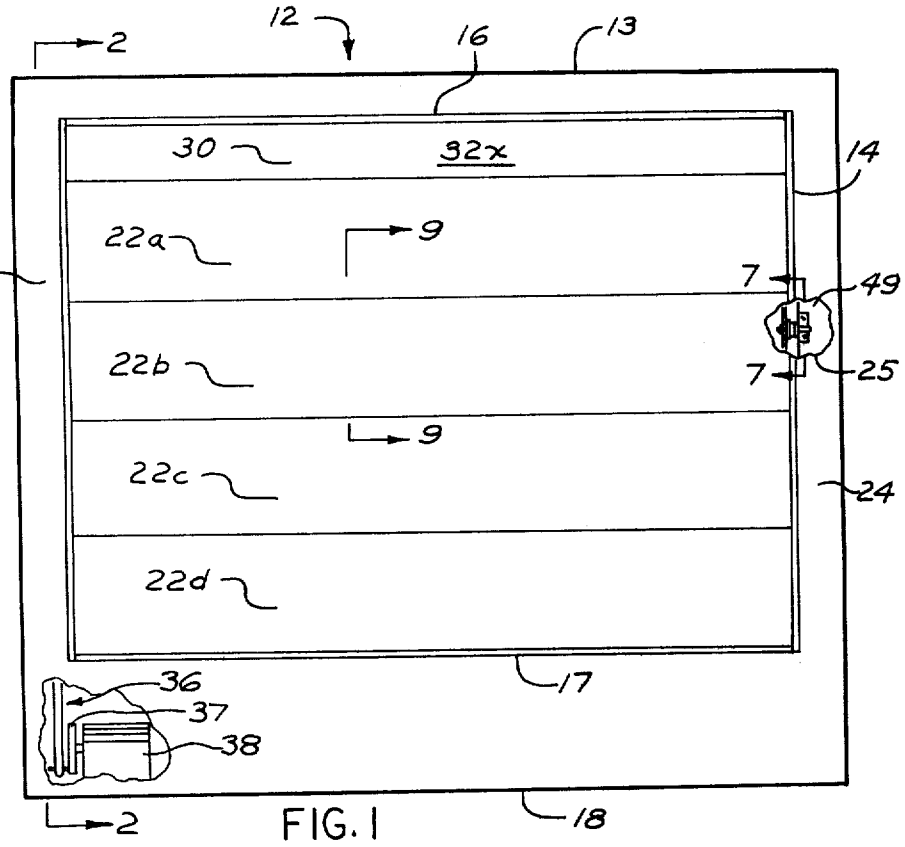


FIG. 1

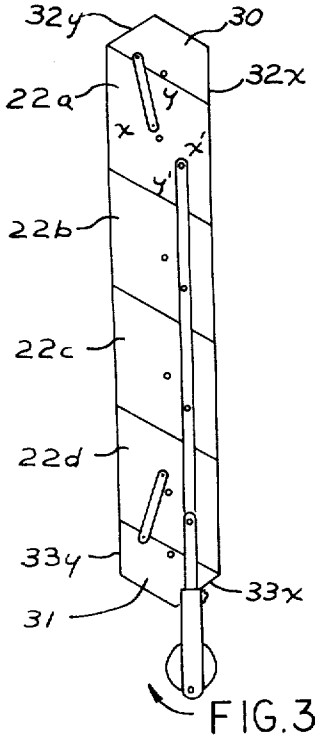


FIG. 3

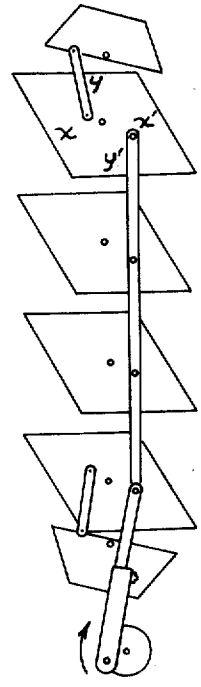


FIG. 4

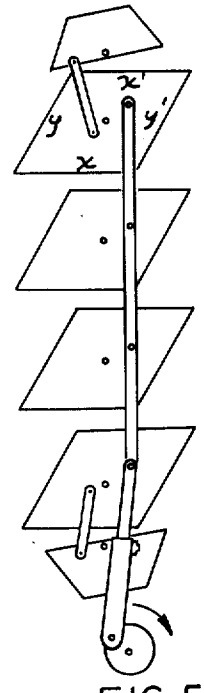


FIG. 5

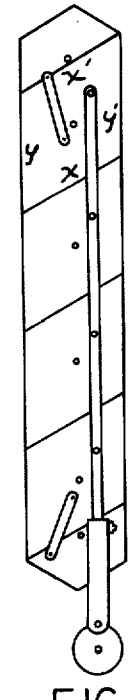


FIG. 6

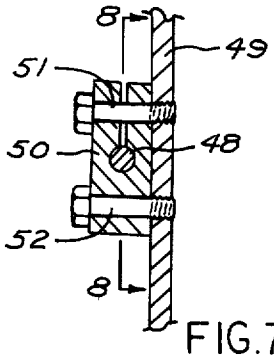


FIG. 7

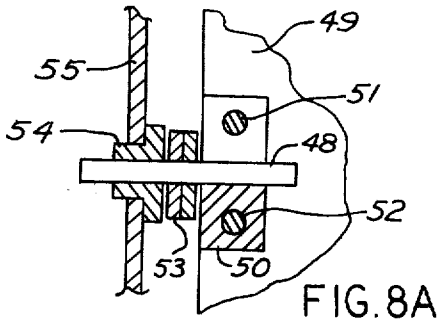


FIG. 8A

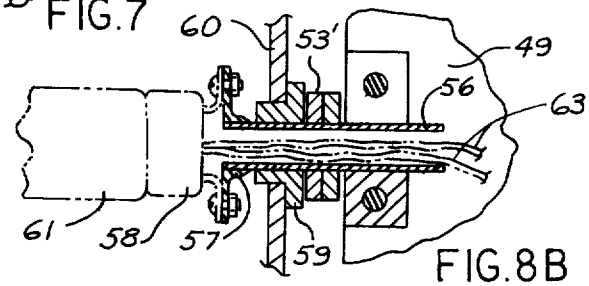


FIG. 8B

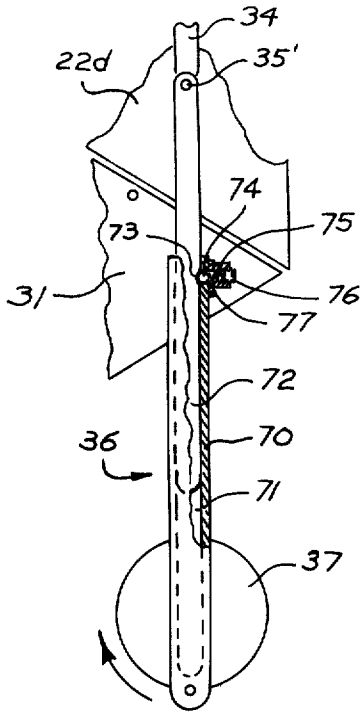


FIG. 11

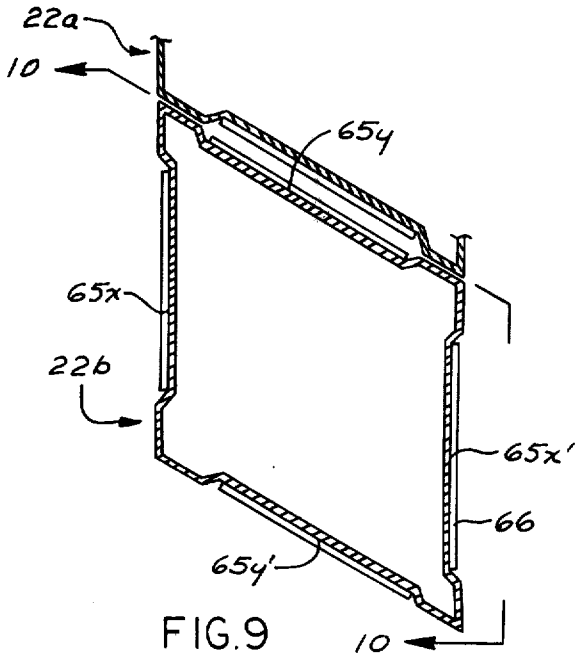


FIG. 9

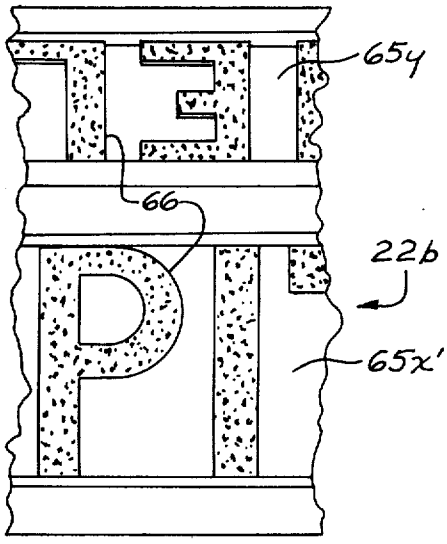


FIG. 10

MULTIPLE MESSAGE SIGN APPARATUS

This invention relates in general to message display apparatus and in particular to sign apparatus for sequentially displaying multiple messages.

The art of providing advertising and display messages for the goods and services provided by various commercial establishments is always striving to provide advertising displays which draw attention to the establishments and which are available at a price within reach of a great number of potential users. One of the more popular types of such advertising displays, particularly for the relatively small retail proprietor who may not have the funds and/or the available space for a relatively large, permanent signboard or billboard, is the so-called "trailer sign," which typically includes a small two-wheel trailer carrying a fixed illuminating signboard. The trailer is parked at a strategic location, in view of potential patrons of an establishement, and a suitable message is displayed on either or both sides of the signboard. Such trailer signs are typically leased or rented to users, who need only pay for the time of actual use of the sign.

The messages displayed on trailer signs, as well as the messages usually displayed on fixed or stationary signs, are typically semi-permanent and are changeable only by manually providing new message letters or by otherwise providing a new semi-permanent message replacing the old message. Many advertisers, however, would perfer a message signboard capable of displaying at least two separate messages in sequence, since a sign providing a changing message display attracts attention and also provides a multiple amount of effective advertising display area for a given area of a signboard.

Message signboards having changeable displays are not unknown to the prior art. Various types of neon signs, for example, have long been used in combination with electrical timing and switching controls to provide various types of changing displays. Such signs are designed and constructed with fixed neon elements representing the desired messages, and are, accordingly, quite expensive. Signboards are also known in the prior art which provide a changeable message through the use of a number of rotatable or otherwise-movable message elements, such as slats, which are rotated or otherwise moved to place various message display surfaces in desired alignment with a viewing face. Such movable-element signs of the prior art are relatively expensive and complex of manufacture, and have found limited acceptance only to the extent of relatively large, permanently mounted billboards. Moreover, such movable-display billboards of the prior art are typically one-faced, that is, a message is displayed on only one viewing face of the billboard. For this further reason, accordingly, movable message billboard mechanism of the prior art are inappropriate for adaptation to trailer signs and other types of relatively inexpensive or double-faced signboards.

Accordingly, it is an object of the present invention to provide an improved multiple message sign apparatus.

It is another object of the present invention to provide a double-faced sign apparatus providing multiple messages on each face.

It is still another object of the present invention to provide a relatively inexpensive multiple message sign apparatus which can sequentially display a first pair of messages on one face, and a second pair of messages on another face, with each message being independent of all other messages.

Other objects and many of the attendant advantages of the present invention will become apparent from the following description of a disclosed embodiment, including the drawing, in which:

FIG. 1 shows an elevation view of one side of a double-faced multiple message sign apparatus according to a disclosed embodiment of the present invention;

FIG. 2 is a modified end section taken along line 2—2 of FIG. 1, showing the arrangement of operative linkage between the array of message support elements, with the side member of the housing omitted;

FIG. 3, FIG. 4, FIG. 5, and FIG. 6 show four illustrative positions of the message support members in a sequence of oscillation between a first message display position and a second message display position;

FIG. 7 is a fragmentary section view taken along line 7—7 of FIG. 1;

FIG. 8*a* is a section view taken along line 8—8 of FIG. 7 showing detail of an axial pivotal interconnection between a message support member and a support frame;

FIG. 8*b* is a section view showing an alternative arrangement of pivotal interconnection, for use with internally illuminated message support members;

FIG. 9 is a fragmentary section view taken along line 9—9 of FIG. 1;

FIG. 10 is a partial elevation view, taken along line 10—10 of FIG. 9, showing a typical message arrangement displayed on adjoining message display faces of one message support member; and

FIG. 11 is an enlarged fragmentary elevation view showing details of the drive interconnection to the message support elements.

Stated in general terms, multiple message sign apparatus according to the present invention comprises an array of separate message support members each of which contains four sides defining a parallelogram. The message support members are interconnected by linkage for oscillation in unison around respective axes of rotation, for rotation between a first position wherein the first pair of parallelogram sides for each message support member are aligned in two parallel and spaced-apart message display planes, and a second position whereat the second pair of parallelogram sides are similarly aligned. Each of the sides of each message support member receives a portion of a particular message to be displayed. Gaps between the supporting frame structure and the sides of the overall messages, resulting from the offset of the parallelogram sides relative to the axis of rotation of each message support element, are filled by a pair of members mounted at each end of the array and connected to oscillate with the messagae support members. The sides of the message support members may be of a transparent or translucent material, and a preferably non-rotating source of illumination may be disposed within each of the message support members to provide internal illumination of the messages carried by the members. The parallelogram prisms may assume the form of rhombic prims in an especially preferred embodiment of the present invention.

The present invention is more particularly shown with reference to the disclosed embodiment and in particular to FIGS. 1 and 2, wherein is shown a multiple message sign apparatus indicated generally at 12 and including a housing 13 surrounding and defining a pair

of aligned and spaced-apart message viewing openings **14** and **15**. Although the housing **13** is depicted as being of unitary construction, it will be understood that this housing may be fabricated of separate elements including the viewing frame members **16** and **17**, which define the height of the message viewing openings as depicted in the Figures. Furthermore, it will be understood that the base **18** of the sign apparatus may be mounted on a trailer or other type of transporting apparatus, if desired, or may be permanently supported; the nature and details of sign apparatus mounting form no part of the present invention, however, and are not described herein.

A plurality of message support members **22***a*, **22***b*, **22***c*, **22***d* are received within the housing **13**, each such member being mounted for rotation on individual axes substantially parallel with the frame members **16** and **17**. Althrough four separate message support members are provided in the disclosed embodiment, it will become apparent that the choice of four is by way of example only and that a greater or lesser number of message support members can be utilized if desired. Each of the message support members **22***a*–**22***d* has a first pair of parallel sides *x*, *x'* and a second pair of parallel sides *y*, *y'* (so designated in FIGS. **3**–**6** for the support member **22***a* only, for clarity of description), and it can be seen that the two pairs of sides *x* – *x'*, *y* – *y'* define a parallelogram cross-section of each message support member. The exterior surfaces of the sides *x*, *x'* and *y*, *y'* can be used to support elements of a message, as is explained in greater detail below.

Each of the message support members **22***a*–**22***d* is mounted for rotation on an axis journaled within the side members **23** and **24** of the housing **13**, with one such journal shown in general at the broken-away area **25** of FIG. **1** and described in detail below. It can be seen from FIG. **2**, as well as from FIGS. **3**–**6**, that the axes of rotation for the several message support members lie within a common plane. The side member **24** is omitted in FIG. **2** so as to illustrate the viewing openings **14** and **15** with greater clarity.

Since the surfaces of each message support member are longitudinally offset relative to the axis about which the message support member oscillates, it can be seen that a gap of substantial extent exists between one end of the array of parallel sides *x*, *x'* (or *y*, *y'*) and one of the frame members **16** or **17**, for each of the viewing openings **14** and **15**. Examples of these gaps are seen in FIG. **2**, where a gap having height of approximately one-half of the width of side *x'* occurs between the upper end of the side *x'* of message support member **22***a* and the frame member **16**. A corresponding gap is visible in the viewing opening **15**, and occurs between the message support member **22***d* and the lower frame member **17**. Although these gaps do not directly affect the operation of the present sign, the gaps appear to the viewer as voids in the displayed messages and are distracting and generally unsightly. Moreover, the gaps provide an unwanted opportunity for the accidental or deliberate insertion of debris into the gap, with consequential jamming and possible damage of the sign oscillating mechanism.

The gap problem is solved in the present invention with the provision of a pair of end members **30** and **31** mounted at respective ends of the array of message support members. Each of the end members **30** and **31** is mounted to be rotatable about an axis disposed in the same plane as the axes of rotation of the message support members. The end member **30** has a pair of sides **32***x* and **32***y*, each of which is of sufficient extent (as measured in the upright or vertical position as in FIG. **2**) to substantially fill the gap which otherwise occurs between an offset side of a message support member and a viewing frame member **16** (or **17**).

The end member **31** has a pair of sides **33***x* and **33***y*, corresponding in dimension and function with the sides **32***x*, **32***y* of the end member **30**. It can be seen in FIG. **2** that each of the end members **30** and **32** has the cross-sectional shape of a trapezoid.

Each of the message support members is connected for oscillation in unison about the respective axes of rotation by way of a linkage **34** connected to an end of each message support member, except **22***d*, with a pin **35** or other suitable rotating connection permitting the linkage to apply only linear force to the connection. The linkage **34** is connected to message support member **22***d* and to a drive link **36** through a common pin connection **35'**, which is in turn connected by a pin connection to the drive wheel **37**. The drive wheel **37** is rotated at a suitable speed by the motor **38**, and it will be appreciated that the motor may include an appropriate speed reduction mechanism to rotate the drive wheel **37** at a speed which is less than the output speed of the motor.

With the parallelogram configuration chosen for the message support members of the disclosed embodiment, it is necessary to rotate each of the message support members 120° to transport the array of message support members from the position shown in FIG. **2**, wherein the sides *x*, *x'* are visible through the respective openings **15** and **14**, to the position shown in FIG. **6**, where the respective sides *y*, *y'* are visible through the openings. The identical distances between each pin connection **35** of the linkage **34** and the respective rotational axes of the message support members is, accordingly, selected to accomplish 120° rotation of each message support member in response to 180° rotation of the drive wheel **37** from the lowermost position, as depicted in FIG. **3**, to the uppermost position, as depicted in FIG. **6**. The exact dimensions of the support members and the drive wheel, and selection of such dimensions are well within the ability of those skilled in the art.

The end member **30** is rotated by force applied through a link **42** having a pin connection **42***a* with the end member **30** and a pin connection **42***d* with the adjacent message support member **22***a*. The end member **31** similarly is driven for rotation by a link **43** having a pin connection **43***a* with the end member **31** and a pin connection **43***d* with the adjacent message support member **22***d*. The parallelogram-configured message support members used in the disclosed embodiment are equilateral parallelograms. or rhombic sections, having acute angles of approx. 60° and obtuse angles of approx. 120°. Since each of end members **30** and **31** defines a trapezoid, the major base of which is substantially parallel with a facing side *x* or *y* of the adjacent message support member during message display positions of the array, as depicted in FIGS. **3** and **6**, the end members **30** and **31** each have an including angle of 60° between the major base and each of the sides **32***x*, **32***y* and **33***x*, **33***y*, respectively. From the foregoing analysis, it will be understood that it is necessary for each of the end members **30** and **31** to be rotated 60° during the aforementioned 120° rotation of the message support members. This desired 60° rotation of the end members **30** and **31** is accomplished through the

proper location of the pin connections **42***a* and **42***b* of the link **42**, and of the pin connections **43***a* and **43***d* of the link **43**. The specific lengths of the lever arms defined between the aforementioned pin connections and the rotational axes of the end members and the respective adjacent support members is not critical, so long as the relationship of such lever arms produces the aforementioned 60° rotation of each end member in response to 120° of rotation for the message support members.

A complete message change sequence of the disclosed sign apparatus will now become apparent from consideration of FIGS. **3–6**. FIG. **3** shows a first message display position of the message support member array, wherein all of the *x* sides are substantially arranged in parallel plane alignment for viewing through the viewing opening **15** (not shown in FIGS. **3–6**) and wherein all of the *x'* surfaces are correspondingly arranged for viewing through the viewing **14** (also not shown in FIGS. **3–6**). The connection between the drive link **36** and the drive wheel **37** is at bottom dead center at this time. As the drive wheel **37** rotates in the designated direction, the drive link **36** moves upwardly as shown in FIG. **4**, causing corresponding movement of the linkage **34** and rotation of the several message support members. It can be seen in FIG. **4** that the respective sides *x*, *x'* of the several message support members have commenced moving away from the aforementioned parallel plane alignment with each other. At the same time, moreover, the surfaces *y*, *y'*, which previously were in confronting alignment with each other, have commenced movement toward the positions previously occupied by the surfaces *x* and *x'*. It can also be seen in FIG. **4** that the end members **30** and **31** have commenced rotating in response to movement of the adjacent message support members.

FIG. **5** shows the message support members and the end members approximately three-quarters toward completion of the transition of message display. The transitional movement continues until the drive link **36** is at an uppermost or top dead center position, as in FIG. **6**, whereat the several message support surfaces *y* are in substantial parallel plane alignment for viewing through the viewing opening **15** and the message support surfaces *y'* are similarly aligned for viewing through the viewing opening **14**. It can also be seen in FIG. **6** that the side **32***y* of the end member **30** is in alignment with the message support member sides *y*, while the side **32***x* of the end member **30** has moved upwardly to the out of viewing sight. Similarly, the side **33***x* of the end member **31** is in alignment with the sides *y'* of the message support members and the side **33***y* has moved downwardly out of viewing position.

The drive motor **38** can be controlled to pause at the top dead center position, depicted in FIG. **6**, and also to pause at the bottom dead center position. Continuing rotation of the drive wheel **37** beyond the top dead center position causes a reversal of the foregoing operative sequence to place the message support members and the end members once again in the position shown in FIG. **3**. The speed of rotation of the drive wheel **37** is selected to provide a desired period of dwell time whereat the drive link **36** has substantially or completely accomplished the maximum extent of upward or downward travel, since the dwell time determines the viewing time for each message display surface. If it is desired to provide a longer dwell time then can be practically obtained with a simple rotating drive wheel **37**, while maintaining a relatively rapid message change, it may be desirable to reciprocate the drive link **36** with a suitable alternative mechanism providing the desired relative long dwell times combined with relatively rapid message changeover times. Such alternative mechanisms are within the capability of the person of ordinary skill in the art.

The axes of rotation and support for the several message support members can be provided by any suitable rotational arrangement, in the case of a non-illuminated message sign apparatus, although a preferred arrangement of simplified construction is shown in FIG. **7** and FIG. **8***a*. An axle pin **48** is non-rotatably secured to a support member **49**, which is mounted within the side member **24** of the sign apparatus. The axle pin **48** may be secured in place within a split clamp block **50** secured by fasteners **51** and **52** to the support member **49**. The axle pin extends outwardly away from the support member **49** and is rotatably received within a bushing **54** secured within an end wall **55** of a message support member **22***b*, for example. The proper spacing distance between the end wall **55** and the support member **49** may be maintained by one or more spacers **53** positioned on the axle member **48**. It will be understood that a similar axle arrangement is also present at the other end of the message support member **22***b*, as well as at the ends of the other message support members.

Although messages contained on the sign apparatus of the present invention can be externally illuminated by such known expedients as floodlamps or other illumination sources directed toward the faces of the sign members, the sign construction of the present invention is readily adaptable to internal illumination of the message support members. It will be understood that internally illuminated message support members must have sides which are translucent or otherwise transmissive of illumination; the message indicia on such internally illuminated surfaces preferably, although not necessarily, would be opaque relative to such illumination-transmissive material. A preferred arrangement for maintaining a source of illumination within the message support members is shown in FIG. **8***b*, it being understood that such arrangement in conjunction with a rotational axis of the message support member would be used in lieu of the construction shown in FIG. **8***a* for a non-illuminated message support member. A hollow axle tube **56** is affixed to the support member **49** by any suitable clamping arrangement such as a split clamp block similar to the block **50**. The axle tube **56** extends away from the support member **49** to terminate at a flange **57** which is connected to a conventional lamp connector **58** located within a message support member. A bushing **59** is mounted in an end wall **60** of the message support member, with the bushing **59** being rotatably received on the axle tube **56**. Spacers **53'** can be positioned about the axle tube **56** as necessary to center the message support member. A suitable lamp **61** is connected to the lamp connector **58**, and electricity is supplied to the lamp by the wires **62** extending through the hollow axle tube **57**. It will be again understood that a similar bearing and lamp support arrangement is provided at the opposite end of the message support member. The lamp **61** may conveniently, although not necessarily, be provided by a fluorescent lamp of appropriate length.

It will be appreciated that the above-described illumination and bearing arrangement provides relatively

uniform illumination along the entire length of each message support member while maintaining the lamp **61** in a stationary non-rotating arrangement, thereby avoiding the problems caused by current slip rings or flexible wires which are continuously and repetitively twisted as the message support members oscillate.

Turning next to FIGS. **9** and **10**, there is shown a preferred construtions of the message surfaces provided by the message support members. it is desirable to have the "hidden" surfaces of the sign array disposed practically in confronting relation with each other, so that the amount of visible gap between adjacent support members, for example, the members **22***a* and **22***b*, is minimized. This requirement conflicts with a desire of many message sign users to employ raised interchangeable individual letters and numbers to compile the messages carried on the surfaces of the message support members, since such raised indicia could cause the support members to become or to undergo less than a desired 120° of rotation. With reference to FIG. **9**, however, it can be seen that each of the message sides *x*, *x'* and *y*, *y'* has formed therein a message receiving depressed region defined by respective numerals **65***x*, **65***x'* and **65***y*, **65***y'*. Each of these depressed regions preferably extends along substantially the entire length of the message sides, and each region is sufficiently tall to accommodate the indicia **66** to be used. The extend to which the regions **65***x*–**65***y'* are depressed below the nomimal plane of the message surfaces should be at least sufficient to accommodate the thickness of the indicia to be used.

Although the message support member of FIG. **9** is depicted as being of unitary construction, it will be understood that the four sides of the message support member may be constructed of separate panels which are suitably joined together, along with the aforementioned end walls, to provide a message support member which is hollow and relatively light in weight, and which therefore requires a relatively low amount of power to accelerate the support members into rotation from a dwell position and to decelerate the members to the next dwell position.

It is desirable to include an appropriate overload prevention mechanism in the drive arrangement of the oscillating support members, so that the motor **38** will not become overloaded or a message support member will not become damaged by some blockage of the sign apparatus. Such blockages can occur especially during the message-transition phase of operation, through the accidental or maliciously deliberate insertion of debris into the openings which momentarily occur between the oscillating message support members. A preferred overload connection is combined in the drive link **36**, as particularly shown in FIG. **11**, which includes a trombone connection having an outer member **70** with an elongated internal passageway **71** therein. An inner member **72** of corresponding elongate configuration is freely slidably received in the passageway **71**. A detent notch **73** is formed at a predetermined location along the inner member **72**, and a member such as the ball **74** retained in the support receptacle **77** is resiliently urged into the detent notch by the spring **75**. The resilient force exerted on the ball **74** can be adjusted by rotation of the threaded spring retaining plug **76** closing the outer end of the receptacle **77**. The free end of the inner member **72** is attached to the pin connection **35'** of the message support member **22***d*.

The resilient force applied to the ball **74** is sufficient to maintain the ball in locked engagement with the detent notch **73** during normal oscillation of the message support members. The resilient force on the ball **74** is adjusted to allow the ball to become moved out of the detent notch **73**, however, in the event that the linear force applied along the drive link **36** exceeds some certain predetermined amount. The ball **74** then rides along the surface of the inner member **72** as the outer member **70** reciprocates, and it will be seen that the ball **74** re-engages the detent notch during return travel of the outer member **70**. In the case of a sign jammed with debris lodged between message support members, this reengagement of the ball and the detent notch may move the message support members in a direction sufficient to dislodge the debris and permit continued oscillation of the message support members. Even if the debris remains lodged, or the message support members remain otherwise jammed, the ball and detent notch continue to engage and disengage to prevent damage either to the message support members, the linkage, or the motor **38**.

The indicia **66** can be removably secured to the several depressed regions **65** by any appropriate attachment expedient, such as with magnetized indicia and a magnetically-attractive surface of the depressed regions, by the use of tape or other adhesive substances, by the use of Velcro interconnective material on the backs of the indicia and on the depressed regions, or the like.

It can be seen that the message support members of the present sign apparatus are oscillated by a drive mechanism which completely avoids the use of gears, flippers, or other expensive and relatively cumbersome driving elements. The arrangement of linkage **34**, drive link **36**, and the drive wheel **37**, with the pin connections **35'** and **35** aligned with the bottom dead center position of the drive wheel, provides maximum lever arm between the pin connection **35'** and the axis of the message support member **22***d* as the link **36** commences its respective upward and downward movements. An alternative drive arrangement providing appropriate drive velocity and extent of travel can be substituted, as will be understood.

It should be understood that the foregoing relates only to a preferred embodiment of the present invention, and that numerous changes and modifications may be made therein without departing from the spirit and the scope of the invention as defined in the claims which follow.

What is claimed is:

1. Changeable message sign apparatus comprising:

support means including a pair of spaced apart frame members defining opposed sides of a message region including a pair of aligned spaced apart openings of viewing messages displayed in said message region;

an array of separate message support means disposed in said message region, each of said message support means having further means whereby the message support means are mounted for rotation on respective parallel coplanar axes;

each of said message support means having four message support sides which are parallel with the respective said axis of rotation and each of said four sides being spaced apart from the axis of rotation to define a parallelogram having a first pair and a second pair of parallel message support sides;

said message support means being juxtaposed for rotation on said axes between first and second positions whereat confronting sides of adjacent message support means substantially abut each other;

linkage means interconnecting each of each message support means for oscillation in unision between a first said position, placing all of the one message support sides of the first pairs of sides substantially in parallel plane alignment for viewing through one of said viewing openings and placing all of the other sides of said first pairs substantially in parallel plane alignment for viewing through the other of said viewing openings, and said second position, placing all of the one message support sides of the second pairs of sides substantially in parallel plane alignment for viewing through said one viewing opening and placing of the other sides of said second pairs substantially in parallel plane alignment for viewing through the other of said viewing openings;

a first end member having a first side and a second side defining the opposite nonparallel sides of an isosceles trapezoid, said first end member mounted parallel to and adjacent the message support means at one end of said array for selective oscillation between a first position and a second position;

the first position of said first end member placing said first side thereof into a gap in said one viewing opening between a frame member and an offset side of said adjacent message support means, and the second position of said first end member placing said second side thereof into a gap remaining in said other viewing opening between said frame member and another offset side of said adjacent message support means; and

a second end member having a first side and a second side defining the opposite nonparallel sides of an isosceles trapezoid, said second end member mounted parallel to and adjacent the message support means at the other end of said array for selective oscillation between a first position and a second position,

the first position of said second end member placing said first side thereof into a gap remaining in said other viewing opening between the other frame member and an offset side of said adjacent message support means and the second position of said second end member placing said second side thereof into a gap remaining in said one viewing opening between said other frame member and another offset side of said adjacent message support means,

so that each viewing opening displays a complete first message or second message without any visible gaps at the ends of the array of message support means.

2. Apparatus as in claim **1**, further comprising means connecting said first end member and said second end member for said selective oscillation in unison with oscillation of said message support means.

3. Apparatus as in claim **1**, further comprising:

first means connecting said first end member to the adjacent message support means at said one end of said array for said selective oscillation in unison with oscillation of said adjacent message support means; and

second means connecting said second end member to the adjacent message support means at said other end of said array for said selective oscillation in unison therewith.

4. Apparatus as in claim **1**, wherein:

the axes of rotation of each of said message support means are coplanar;

each of said first and second end members, as viewed in section perpendicular to its axis of oscillation, defines the nonparallel sides of said trapezoid; and

each of said end members oscillates about a respective axis of rotation coplanar with the axes of rotation of said message support means.

5. Apparatus as in claim **1**, wherein:

said message support sides are transmissive of illumination; and

illumination means nonrotatably disposed within each of said message support means.

6. Apparatus as in claim **5**, wherein:

said illumination means comprises an axis member extending from fixed relation with said support means along the axis of rotation of a message support means to a location in communication with a hollow region within said message support means;

electrical conductive means disposed in said axis member;

means connected with said message support means in rotation bearing relation with said axis member; and

a source of illumination disposed within said message support means and nonrotatably supported by said axis member, said source of illumination connected to said electrical conductive means.

7. Apparatus as in claim **1**, wherein:

said linkage means comprises means pivotally attached to each of said message support means at a certain location spaced apart from each of said axes of rotation;

motive means rotating an output wheel; and

a drive link interconnected between said pivotally attached means and a radial location on said output wheel which oscillates said message support member from said first position to said second position in one-half revolution of the output wheel.

8. Apparatus as in claim **7**, wherein:

said drive link includes a first member having an elongate internal passageway;

a second member of elongate configuration received within said internal passageway and dimensioned to be freely reciprocable therein;

one of said first and second members connected to said output wheel and the other member connected to said pivotally attached means;

a detent formed in said second member; and

a member mounted on said first member and resiliently engged with said detent to transmit drive force sufficient for normal oscillation of said message support members and to disengage said detent if the drive force exceeds a certain maximum amount.

9. Apparatus as in claim **1**, wherein:

each of message support sides comprises a generally plane surface having a message receiving depressed region extending along substantially the length of the message support side and of sufficient depth to hold changeable indicia displays without interferences when sides of adjacent message supports confront and substantially abut each other.

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