Dec. 20, 1938. A. H. KENIGSBERG 2,140,703

INTERCHANGEABLE GASEOUS LUMINOUS SIGN

Filed July 17, 1936 2 Sheets-Sheet 1

Fig. 1.

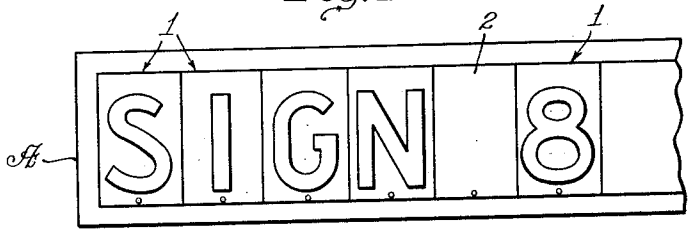


Fig. 2.

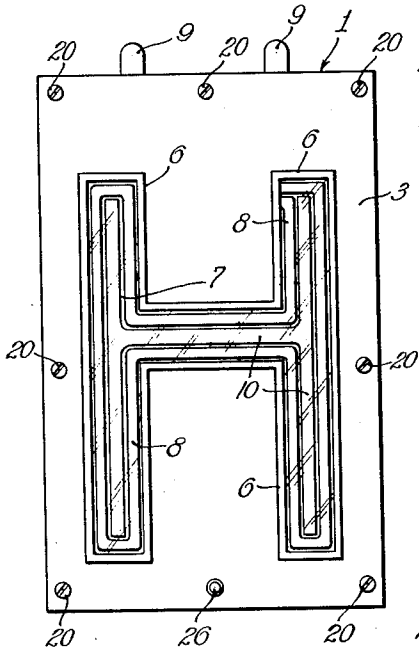


Fig. 3.

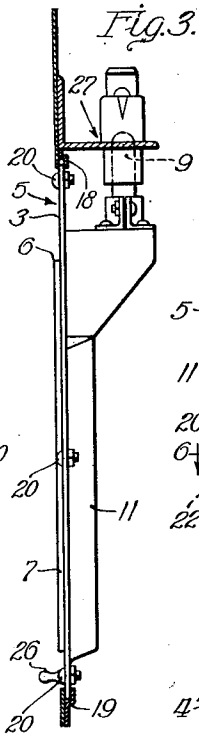
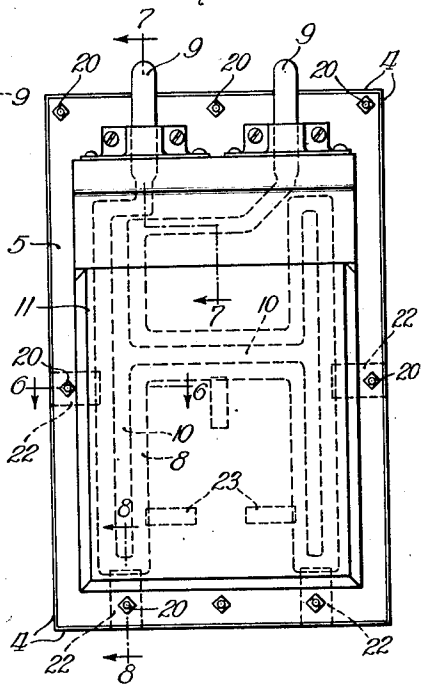


Fig. 4.



Inventor:
Alexander H. Kenigsberg
By: Brown, Jackson, Boettcher & Dienner
Attys.

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Fig. 5.

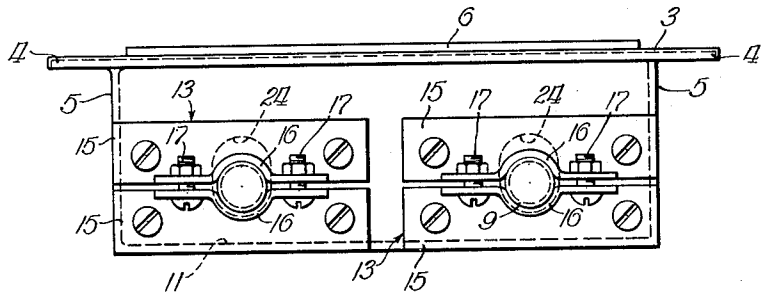


Fig. 6.

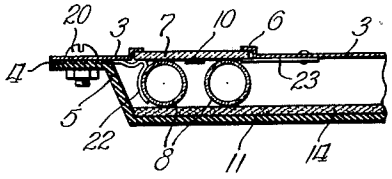


Fig. 7.

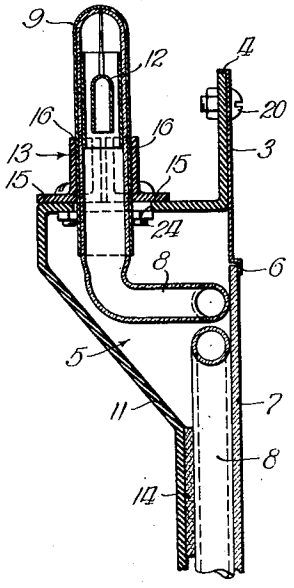
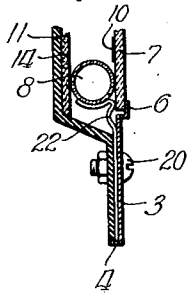


Fig. 8.



Inventor:
Alexander H. Kenigsberg
By: Brown, Jackson, Boettcher & Dunn
Attys.

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UNITED STATES PATENT OFFICE

2,140,703

INTERCHANGEABLE GASEOUS LUMINOUS SIGN

Alexander H. Kenigsberg, Chicago, Ill.

Application July 17, 1936, Serial No. 91,021

25 Claims. (Cl. 40—130)

This invention relates to interchangeable gaseous luminous signs, and more particularly is directed to a sign construction in which individual character elements, such as letters, figures, numerals or the like are interchangeable in order that the wording or appearance of the sign may be changed at will.

The primary object of the present invention is to provide a new type of a luminous gaseous sign that has interchangeable characters, which can be readily and quickly assembled and installed, and the individual character elements thereof replaced at will by any one, without previous experience, and without the use of tools or the like so that a single supporting frame may be employed, and the sign carried by the frame may be changed whenever desired by the interchangeability of the characters and figures.

Another object of the present invention is to provide a luminous sign of this type that is so arranged that the individual characters, when inserted into the supporting frame, become connected to the source of power, such as by plugging the electrodes into sockets or the like.

Another feature of the present invention is the provision of a sign which can be made up of a number of various colors and configurations, each of the characters of the sign being individual and all of the characters being fed from the same source of current supply, it being understood that one or a plurality of transformers may be employed between the source of current and the characters of the sign.

One of the outstanding features of the present invention is the provision of a sign which further promotes and improves the appearance of advertising matter carried by mercantile establishments, such as theaters, restaurants, stores, railroad stations and other similar establishments. The present sign is capable of being made more decorative and attractive in appearance than the luminous signs with which I am familiar.

Another feature of the present invention is the provision of a gaseous luminous sign that can be readily dismantled, conveniently packed and shipped to another location without danger of breaking, and without taking the special precautions in shipping and packing that are now required with the transportation of the continuous non-interchangeable type of luminous sign.

Still another advantage of the present invention is the provision of a gaseous interchangeable sign of the type disclosed, in which the individual characters thereof can be carried in stock by the manufacturer, and supplied substantially immediately upon demand, without having to wait until a particular character is made up, or a defective or damaged character is repaired or replaced.

It is to be observed that by the present construction, the sign can be made much more cheaply, because of standardized production, and can therefore be produced economically and sold at low cost, placing such signs within the reach of the ordinary small merchant.

Other objects and advantages of the present invention will appear more fully from the following detailed description, which, taken in connection with the accompanying drawings, will disclose to those skilled in the art the particular construction and operation of a preferred form of the present invention.

In the drawings:

Figure 1 is a somewhat diagrammatic view showing the set-up of a typical sign employing the features of the present invention;

Figure 2 is a front elevational view of an individual character to be employed with the sign;

Figure 3 is a side elevational view of the character shown in Figure 2, and also illustrating fragmentarily the manner in which the unit is supported in a supporting frame;

Figure 4 is a rear elevational view of the unit shown in Figure 2;

Figure 5 is a top plan view of the unit shown in Figure 2;

Figure 6 is a sectional view taken substantially on line 6—6 of Figure 4;

Figure 7 is a vertical sectional view taken substantially along the line 7—7 of Figure 4; and

Figure 8 is a sectional view taken substantially on line 8—8 of Figure 4.

Referring now in detail to the drawings, in Figure 1 I have shown a supporting frame indicated generally at A, in which the individual units 1 are supported for display purposes. Each of the units 1 is adapted to carry a suitable character, such as a letter, numeral, figure, punctuation mark or the like, and to provide for proper spacing of the sign within the frame, spacer members such as shown at 2, which are blanks on the face of the sign, but may be electrically resistant members on the reverse side, can be inserted between the various words or characters constituting the sign, and can be used adjacent the end portions of the sign to center the characters with respect to the frame A.

Considering in detail one of the units embodied in the sign, reference is made to Figures 2 to 8, inclusive, in which a single unit adapted for in-

sertion in a sign such as the sign shown in Figure 1 is illustrated. This unit 1 comprises a frame member 3, which preferably is formed of metal or the like, and may be formed as a metal stamping, provided with a peripheral rearwardly extending flange 4 and with a suitably formed outwardly extending retaining flange 6 which is cut to the configuration of the particular character which it is desired to embody in the unit. The flange 6 defines the peripheral edge of the cut-out portion of the frame 3 in which is to be displayed the luminous gaseous tube forming the individual character or figure carried by the unit.

Mounted on the rear face of the frame 3, and disposed within the flange 4 of the frame, is the housing 5, which housing is preferably formed of an electrically insulating material, such as "Bakelite" or any other similar fabricated or molded insulting material. The housing 5 has a planar defining flange portion which seats against the rear face of the frame 3, and which is secured to this frame by a plurality of securing means such as the bolts 20.

The housing 5 extends rearwardly from the frame 3, and is provided with the rearwardly extending housing portion 11 forming a chamber for receiving the tube forming the gaseous luminous sign.

Preferably the housing is molded, with rounded corners, and is provided with recesses formed in the flange portion thereof adapted to receive the extending ends of spring members 22 held in fixed position against the frame 3 and secured against movement by means of the securing means 20, the clip members 22 serving to support the gaseous tube portion of the sign in fixed position within the cut-out opening defined by the flange 6 formed on the frame 3. The flange 6 is extended outwardly from the front face of the frame, and has the normally extending lip portion which serves as a retaining edge for holding a glass or similar transparent or translucent plate member 7 in position closing the opening formed by the defining edge of the flange. It may be colored to secure color effects in the sign. The glass panel or plate 7 is cut to a configuration determined by the flange 6, and is disposed to cover the opening into the housing 11. The plate 7 may be held against inward movement with respect to the frame 3 by means of suitable spring clip members 23, as indicated in Figure 6, which are secured in suitable locations to hold the glass firmly against the inside surface of the overhanging portion of the flange 6.

Disposed within the housing 11 rearwardly of the glass plate 7 is the sealed tube 8, bent into the desired configuration conforming to the character to be carried by the unit 1, and containing the inert luminous gas commonly found in signs of this type. Such gases as neon, helium, argon and the like are usually employed, and metallic vapors, or other material may be added to the gas within the tube 8 to give the desired color or characteristics. The tubing 8 is continuous, and the two ends thereof are bent rearwardly, as shown in detail in Figure 7, and then upwardly in the preferred embodiment of the present invention where they are joined, as by welding, to the open ends of electrodes 9 which project outwardly through an enlarged opening 24 formed in the top surface of the housing 11 of the member 5. The free projecting ends of the tube 8 are permanently and integrally connected to the electrodes 9, which comprise a metallic sheath member outside and the shell portion 12 disposed within the electrode at the end of the tube 8 and suitably shielded and insulated, when desired, such as by mica or the like. The electrodes 9 for the two ends of the tube are held in fixed position with respect to the housing 5 by means of the bracket members 13, which are provided with horizontally flanged portions 15 seating on the upper surface of the enlarged portion of the housing 11 and suitably secured thereto, as by bolts or the like, and having the projecting semi-cylindrical portions 16 engaging about the cylindrical surface of the extending portion of the electrodes, the bracket members being preferably in two pieces for adjustability and having parallelly extending flanges adapted to be bolted together by the bolts 17 for securely gripping the electrode and holding the same in position, and transferring any possible stress from the glass electrode to the housing 5.

It will be noted that the electrodes 9 are spaced from the defining edges of the openings 24, so that the electrodes are supported freely with respect to the housing and to prevent any fracturing or damaging of the glass during assembly of a character, or due to vibrations or the like.

In order to further insure against damage to the tube occurring through vibrations when the sign is shipped, or mounted in locations where it will be subject to vibration or the like, I preferably provide a felt or other suitable padding 14, disposed against the inner rear face of the housing 11, and supporting the tubing 8 between the glass panel 7 and the housing 11. The tubes are thus cushioned against vibration, and held in engagement with the inner face of the glass panel 7.

Since the tube 8, as indicated in Figure 2, forms a double lined character, there is a central portion of the glass plate 7 which is not contacted by the tube, and which may be, as well as not, painted in any suitable manner, as indicated at 10 in Figures 6, 7 and 8, to make the characters show up in the daytime and to prevent the transmission of light therethrough and to thus additionally define the exact outline of the tube 8. In addition, the defining edge of the flange 6 surrounding the panel 7 may be colored, in any suitable manner, to define more clearly the shape of the character, and to add to its visibility during daytime. Also, the front face of the frame 3 may be suitably colored if desired to provide the same effect.

It is therefore apparent that by the use of various gases, well known in the art, various colors may be produced in the characters, and by the combination of colored glass for the panel 7, as well as colored glass for the tube 8, and the addition of various chemicals to the contents within the tube, any combination of coloring desired may be effected. Thus also, when the gas filling the tube 8 is charged electrically by connection of the electrodes 9 to any suitable source of current, the tubes becoming luminous give forth a color depending upon the contents of the tube and the color of the glass forming the tube. The peripheral defining edge of the flange 6, together with the outline of the tube and the outline of the panel 7, produces a luminous character which stands out and is well exposed, so that it is at once attractive, pleasing, and arrests the attention of those who view it.

It is apparent that the flange portion of the member 5 forming the housing 11 can be secured to the frame 3 in any desired manner, and the bolts 20 are intended to represent and illustrate

only one of a number of securing means. The same is true with respect to the location and number of spring clips 22 and retaining clips 23 which may be employed. The use of these clips depends upon the particular character or configuration presented by the unit, since a simple character such as the letter I would require very little supporting, while a complicated letter or figure representing an animal or the like might require a much more elaborate system of cushioning and support for preventing the transmission of vibration to the tube. The use of the clips may be omitted entirely.

If desired, suitable sealing means may be provided between the panel 7 and the flange 6, as for example the use of any suitable type of glass cement, asphalt or the like, and similarly, the defining edge of the flange 4 may be sealed to the flange portion of the member 5 in any suitable manner. This, together with sealing means can be provided, if preferred, between the flanged portions 15 of the bracket 13 seals the interior of the housing 11, so that entrance of moisture, dust or insects, or the like is substantially eliminated, thus enabling the sign to remain clean and clear at all times without additional attention, expense or effort, which is not the case with ordinary luminous signs, whether gaseous or not. If it is desirable also the flange portion of the member 5 may be cemented or otherwise secured to the inner face of the frame 3 without the use of any independent securing means. The clip members such as indicated at 22 and 23 are preferably insulated electrically in any suitable manner with respect to the tube and frame 3.

Since the individual units must be inserted into and removed from the supporting frame A when it is desired to change the sign, I have indicated a simplified type of support. The frame A, as shown in section in Figure 3, has on the rear face thereof the continuous or intermittent clip members 18 and 19, which members form horizontally extending recesses along the upper and lower portions of the opening in the frame and are adapted to receive the defining upper and lower edges of the unit 1. As indicating one manner in which the unit may be supported, in Figure 3 the unit is first moved into position with its upper edge between the frame A and the clips 18. The edge is then moved upwardly into the clips, until the lower edge of the unit 1 is above the opening defined by the frame A and clip 19. Simultaneously the electrodes enter the housing 27, which housing is fastened or supported in the rear of the supporting frame A, thus establishing contact with the source of electrical current. The lower edge is then guided into the defining recess between the clip 19 and frame A, and the unit is thus held in supported position. Within the rear portion of the frame A, suitable conducting means may be provided for coupling the electrodes 9 to the source of current supply as it is inserted into position. When it is desired to insert or remove the unit, a handle member 26, which may be of any desired shape and configuration, and which is suitably mounted at the lower portion, as well as the upper, or both, of the frame 3, as indicated in Figures 2 and 3, is grasped, and the unit is moved upwardly until the lower edge thereof clears the lower defining edge of the frame. The lower end of the unit is then swung slightly outwardly, and allowed to drop downwardly to remove the upper edge of the frame from its engaged position. The unit can then be readily withdrawn from the supporting frame for the sign.

I am aware that various changes in detail from construction and design are possible within the limits of the present invention, and I do not therefore intend to limit the invention except as defined by the scope and spirit of the appended claims.

I claim:

1. An interchangeable gaseous tube sign comprising a supporting frame, a plurality of electrode-receiving sockets carried by said frame, a plurality of independent character-bearing units adapted to be mounted in said supporting frame, blank spacing units for said sign, each of said character-bearing units having individual electrodes extending into said sockets for energizing said unit from a source of current supply, and means carried by each of said units including a defining peripheral flange for setting said character out in relief with respect to said unit.

2. An interchangeable luminous sign comprising a supporting frame having depending spaced electrode-receiving sockets supported rearwardly of said frame at the upper portion, thereof, a plurality of individual character-bearing units adapted for detachable support in said supporting frame and having individual upwardly projecting electrodes adapted to enter into said sockets for connecting each unit to a common source of current supply, blank spacing units adapted for detachable support in said frame, and means in said frame providing for insertion of said units into position from either side of said frame.

3. An individual unit for a sign of the class described comprising a supporting frame, an insulating housing secured to the rear face of said frame, a gas-filled tube formed into a predetermined shape disposed in said housing, a flange formed in the face of said frame outlining the periphery of said shape, a transparent or translucent plate supported by said flange, and means at the ends of said tube extending through said housing rearwardly of said frame for connection to a source of current supply.

4. In combination, in a unit for an interchangeable sign of the class described, a frame having a rearwardly extending flange, an insulating housing carried by the frame on the rear face thereof within said flange, a gaseous tube carried in said housing and having electrodes at its ends projecting therefrom for connection to a current supply source, a cut-out opening in said frame of the shape of said tube, a transparent plate disposed in said opening, and means for resiliently supporting said plate and tube in position.

5. In combination, in a unit of the class described, a frame, an insulating housing carried on the rear face of said frame, a defining flange on the front face of said frame about the periphery of an opening defining the outline of a preselected character, a transparent plate over said opening carried by said flange, and projecting from the plane of said frame, a gaseous tube supported in said housing and bent into the shape of said character, the electrode ends of said tube projecting outwardly of the top of said housing, and insulating bracket means clamping said ends of said tube in position with respect to said housing.

6. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each

of said units comprising a member having a front wall provided with an opening shaped to the configuration of the character presented by said unit, a transparent weatherproof closure for said opening, a luminous gaseous tube having electrodes on its opposite ends and an intermediate portion doubled back on itself and shaped to the configuration of the character presented by the unit and disposed behind the transparent weatherproof closure and in register with the correspondingly formed opening in said front wall, and opaque means disposed in front of the space between the doubled portions of the gaseous tube.

7. In combination, a substantially planar frame member having a cut-out opening therein conforming to the shape of a character element, an offset flange defining the periphery of said opening, a transparent plate over said opening within said flange, luminous gaseous tube means bent into the shape of said opening and supported in position against the rear face of said plate, said tube being doubled back on itself in forming said shape to produce a double line effect representing said character, and means on said plate preventing transmission of light therethrough between the parallelly extending portions of said tube.

8. In combination, a substantially planar frame member having a cut-out opening therein conforming to the shape of a character element, an offset flange defining the periphery of said opening, a transparent plate over said opening within said flange, luminous gaseous tube means bent into the shape of said opening and supported in position against the rear face of said plate, said tube being doubled back on itself in forming said shape to produce a double line effect representing said character, means on said plate preventing transmission of light therethrough between the parallelly extending portions of said tube, and means cushioning said tube in position against said plate.

9. An interchangeable unit for a luminous gaseous tube sign having a plurality of individual character-bearing units comprising a frame member having an opening therethrough conforming to the outline of the character to be carried by said unit, a transparent plate mounted in said opening, a housing secured to the back of said frame, a luminous gaseous tube in said housing resiliently supported against said plate and doubled back on itself to form said character with its two ends extending rearwardly away from said plate at one end of said character, and insulating means at the upper end of said housing for leading out the terminal ends of said tube.

10. An interchangeable unit of the class described comprising a substantially planar frame having an opening therein conforming to the peripheral outline of a character to be displayed by said unit, an offset flange about the edge of said opening, a luminous gaseous tube bent double to provide parallelly extending portions defining the character, means carried by said frame supporting said tube in insulated relation thereto in said opening, and opaque means between said parallelly extending portions.

11. In combination, a plurality of interchangeable individual character units having tubes, each of said tubes in each of said units being formed to the shape of a character element, said units being adapted to be combined to produce any desired wording with standardized luminous gaseous tubes, an individual enclosing housing for each of said tubes, means carried by said housings resiliently supporting said tubes in position therein, said housings having openings in the front face thereof conformng to the character element represented by said tubes, transparent closure means over said openings, cushioning means holding said tubes in position against the rear faces of said closure means, and terminal connectors on each of said tubes and projecting from said individual enclosing housings for connecting the same with a source of current.

12. In combination, a supporting frame defining an elongated rectangular opening, a bracket carried by said frame adjacent the upper longitudinal edge of said opening and having spaced pairs of inverted cup-shaped electrode-receiving sockets, interchangeable units for said frame including a frame engaging member having an opening therein conforming to a character element to be portrayed by said unit, a housing secured to the rear face of said frame member, a gaseous tube member in said housing conforming to the outline of said opening and in alignment therewith and having terminal ends projecting upwardly from said housing and engageable in said sockets when the unit is mounted in said frame.

13. The combination set forth in claim 12 characterized in the provision of interengaging means on said supporting frame and said frame member providing for mounting of said unit in the plane of said frame from either side thereof.

14. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising an individual unit frame, gaseous tubes supported on said individual unit frames and constituting unitary parts thereof, said gaseous tubes having electrodes on their opposite ends and their intermediate portions shaped to the configuration of the characters presented by the units, terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame, and means on said supporting frame for detachably securing said unit frames thereto and permitting engagement of the tube electrodes with the terminal sockets and disengagement of same therefrom with said gaseous tubes secured to said unit frames.

15. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising an individual unit frame and a gaseous tube secured thereto and having electrodes on its opposite ends and its intermediate portion shaped to the configuration of the character presented by the unit, terminal sockets carried by said supporting frame, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame, a source of electric current connected to said terminal sockets, and means for detachably securing said unit frames to said supporting frame and permitting engagement of the tube electrodes with said terminal sockets and disengage-

ment of same therefrom with the gaseous tubes in position on said unit frames.

16. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising a tube housing consisting of complementary parts secured together, a gaseous tube clamped between said housing parts, said gaseous tube having electrodes on its opposite ends projecting from the tube housing and its intermediate portion disposed within the tube housing and shaped to the configuration of the character presented by the unit, one of said housing parts having an opening shaped to the configuration of the character presented by said unit and disposed in front of the correspondingly shaped portion of the tube, the other housing part being formed of insulating material, and terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame.

17. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising a tube housing consisting of complementary parts secured together, a gaseous tube clamped between said housing parts, said gaseous tube having electrodes on its opposite ends projecting from the tube housing and its intermediate portion disposed within the tube housing and shaped to the configuration of the character presented by the unit, one of said housing parts having an opening shaped to the configuration of the character presented by said unit and disposed in front of the correspondingly shaped portion of the tube, the other housing part being formed of insulating material, terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame, and cushioning means disposed between one side of the tube and the wall of the adjacent tube housing part for cushioning the tube against vibration and preventing damage thereto.

18. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising a tube housing consisting of complementary parts secured together, a gaseous tube clamped between said housing parts, said gaseous tube having electrodes on its opposite ends projecting from the tube housing and its intermediate portion disposed within the tube housing and shaped to the configuration of the character presented by the unit, one of said housing parts having an opening shaped to the configuration of the character presented by said unit and disposed in front of the correspondingly shaped portion of the tube, terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame, and means for sealing the joint between the housing parts and the openings through which the tube electrodes project from the housing.

19. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising a member having a front wall provided with an opening shaped to the configuration of the character presented by said unit, a transparent weatherproof closure for said opening, a gaseous tube having electrodes on its opposite ends and an intermediate portion shaped to the configuration of the character presented by the unit and disposed behind the weatherproof closure and the correspondingly shaped opening and in register with said opening, and terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on said supporting frame.

20. A luminous gaseous tube sign comprising a supporting frame, a plurality of individual character presenting units adapted for interchangeable mounting on said supporting frame, each of said units comprising a gaseous tube having electrodes on its opposite ends and its intermediate portion shaped to the configuration of the character presented by the unit, the electrode ends and intermediate portion of the tube of each unit being disposed substantially parallel a common plane, with the electrode ends of the tube disposed outside the area of the intermediate character presenting portion of the tube and having the same relative location on all said units, and terminal sockets carried by said supporting frame for connecting the tube electrodes to a source of electric current, said terminal sockets interchangeably receiving the electrodes on the opposite ends of the gaseous tubes and establishing contact therewith when said units are mounted on the supporting frame.

21. In an interchangeable luminous gaseous sign, a supporting frame, electrode housings carried by said frame, a plurality of individual sign units adapted for interchangeable mounting on said supporting frame, means for detachably securing said units to said supporting frame, said units each comprising an individual sign unit frame movable into and out of engagement with said last means, and luminous gaseous tubes carried by said individual sign units and constituting unitary parts thereof, said luminous gaseous tubes having electrode terminals movable into and out of engagement with said electrode housings by substantially the same movement by which said units are engaged with and disengaged from the means for detachably securing said units to said supporting frame.

22. In an interchangeable luminous gaseous sign, a supporting frame, electrode housings carried by said frame, a plurality of individual sign units adapted for interchangeable mounting on said supporting frame, means for detachably securing said units to said supporting frame, said units each comprising an individual sign unit frame engageable with and disengageable from said last means by sliding movement substantially parallel to the planes of said individual sign unit frames, and luminous gaseous tubes

carried by said individual sign unit frames and constituting unitary parts thereof, said luminous gaseous tubes having electrode terminals engageable with and disengageable from said electrode housings by movement generally parallel to the movement of said units in engaging said individual sign unit frames with and disengaging same from the means for detachably securing said units to said supporting frame.

23. An interchangeable luminous gaseous sign unit comprising an enclosure having spaced openings in one end and an opening in its front face corresponding with the character configuration presented by said unit, a luminous gaseous tube bent into the shape of said character and terminating in a pair of electrodes passing through the spaced openings in one end of said enclosure, and a pair of electrode brackets each consisting of two parts and attached to said enclosure near the electrode openings in a manner to form a rigid and compact assembly between the enclosure, the luminous tube and said brackets.

24. In an interchangeable luminous gaseous sign, a substantially rectangular supporting frame, a plurality of electrode housings fixed in position along one side of said frame, a plurality of interchangeable sign units adapted for mounting on said frame and having electrode terminals at one end of each unit, said electrode housings being spaced to receive interchangeably the electrode terminals of said sign units and connected together to form a continuous circuit with said interchangeable units, and means along the opposite side of said frame for engaging the other ends of said interchangeable units.

25. An interchangeable unit for luminous gaseous tube signs, said unit comprising a shielding frame for a luminous gaseous tube, a luminous gaseous tube positioned within the periphery of said frame and having a pair of electrodes extending from the periphery of the frame, and split bushing means secured to the frame and cooperating with the tube electrodes for firmly clamping the tube and frame into a rigid unitary structure.

ALEXANDER H. KENIGSBERG.