May 17, 1932. H. R. KIRKLAND 1,858,994

SIGNAL LAMP

Filed Aug. 20, 1930

Fig. 1.

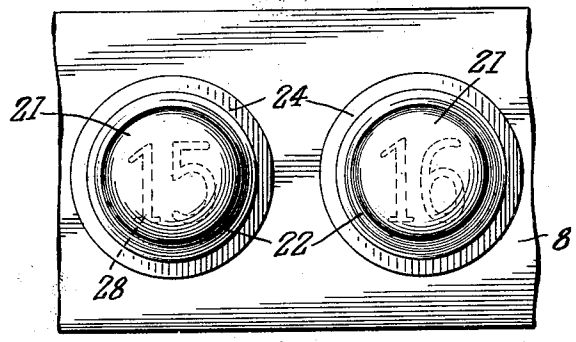


Fig. 2.

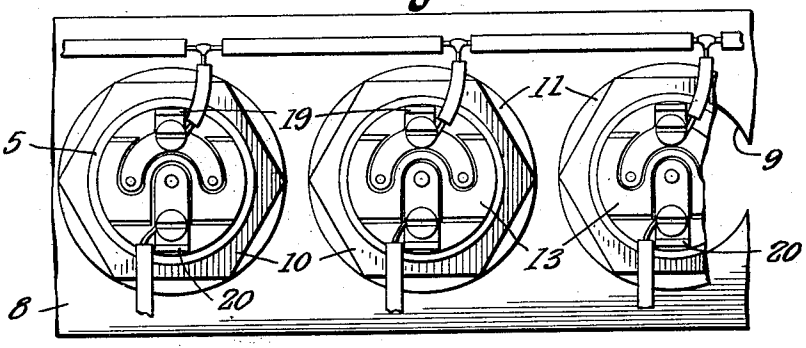
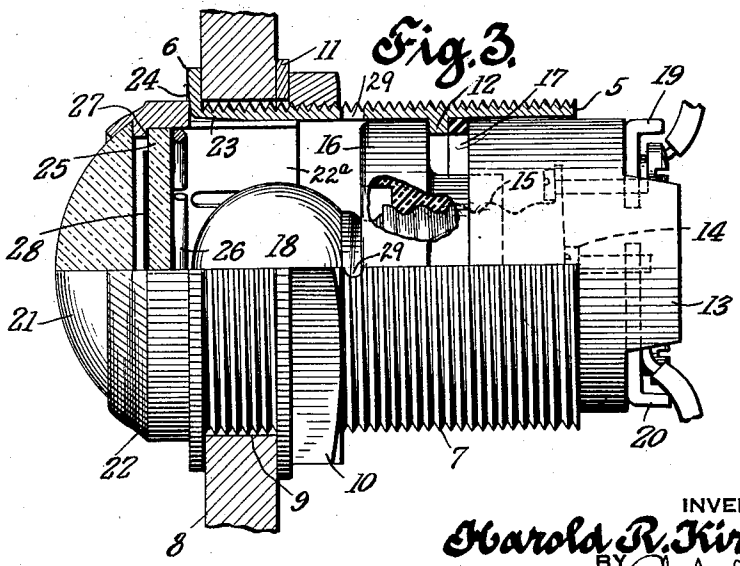


Fig. 3.



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SIGNAL LAMP

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This invention relates to what may broadly be considered as "signal lamps" and the objects of the invention are to provide a simple, practical and inexpensive signal and lamp mounting structure for lamp annunciators, signal systems, electric signs and the like, which can be quickly and easily installed in any desired, closely spaced or other relation in a panel or like support, without requiring the use of any screws or special fastenings, which may be mounted singly, or in rows or groups, or the like, and which when arranged in banks or groups will not require the use of any terminal base and in which the lamps and the related signal elements, lenses or the like, may be reached for changing or repairs at the front of the device, without disturbing the mounting or connections, and in which all the wiring connections may be reached at the back of the device without disturbing any other portions.

Further objects and the many novel features of the invention by which such objects are attained will be clear from the following specification.

The drawings accompanying and forming part of the specification illustrate one of the practical commercial embodiments of the invention, but it will be understood that as the illustration is primarily for purposes of disclosure, the structure may be modified and changed without departure from the true spirit and broad scope of the invention.

Fig. 1 is a front elevation showing the invention as incorporated in the form of annunciator signals set in a panel, the latter being shown broken away; Fig. 2 is a broken rear view of the panel and signal units illustrating particularly the simplicity of the necessary wiring; Fig. 3 is a broken and part sectional longitudinal view of the device on an enlarged scale.

The body of the device consists of a sleeve or shell 5, which may be either of metal or of insulating material. This sleeve provides a tubular housing and support for the various parts of the device. It is shown as having a narrow and thin flange 6 at its front end and as externally screw-threaded for its full length back of this flange as indicated at 7.

This construction enables the device being mounted in a switch panel, annunciator plate, or the like, such as indicated at 8, by simply passing the sleeve through an opening 9 in the panel until the flange brings up against the face of the panel and then screwing a nut 10 over the back of the sleeve until it grips against the back of the panel. A washer 11 is shown as directly engaging the back of the panel to provide a bearing for the nut.

A socket for a lamp globe is mounted in the back or inner portion of the sleeve by providing the latter with an internal annular flange or shoulder 12 and by securing the socket together over this internal shoulder.

In the illustration, the lamp socket consists of a terminal or base portion 13 carrying the center contact screw 14 and screw shell contact 15, and a ring portion 16 internally threaded to screw over the contact shell 15. These two base parts 13 and 15 as clearly shown in Fig. 3, are of a size to slide within the supporting sleeve 5 and to grip between them the inner annular shoulder 12. It will be seen that when the ring 16 is entered in the front of the sleeve and the base 13 at the back of the sleeve and the two parts then screwed together, the socket will be clamped in place over the intervening flange of the shell. A washer is shown interposed at 17, which may be of a yielding nature to produce a firm grip of the socket parts on the positioning flange of the sleeve. When the parts of the socket are locked together in this fashion, they will not turn in the sleeve when a lamp globe, such as indicated at 18 is screwed into or removed from the socket shell.

The base part of the socket carries at the back the wiring terminals 19, 20. When assembling a number of the devices, for instance, in banks or rows, they may be arranged as indicated in Figs. 1 and 2 with the terminals placed to receive the wiring in most orderly fashion. Any one, or any number of the devices however, may be turned to different angular relations to suit special wiring requirements, it being necessary only in any instance to loosen the clamping nut 10 and turn the support relatively

in the panel, tightening the nut after such adjustment. Instead of loosening the support in the panel, the socket ring 16 might be loosened and the socket rotatably adjusted within its tubular support.

At the front the lamp may be covered over by a lens or the like, depending upon the special use to which the device is put. Thus in the illustration, a bull's eye lens is indicated at 21, carried by a lens ring 22 having a rotatably adjustable slip joint mounting in the front of the sleeve by means of the split spring collar extension 22*a* at the back of the same. The entrance to the supporting sleeve is shown as slightly tapered at 23 to facilitate the entry of this spring lens collar and the flange of the sleeve is shown as dished at 24 to cause the lens collar to set down tight against the flange, giving the flange and lens collar a one-piece appearance.

Number plates, letter plates, stencils, or the like, may be used in back of the lens, or in fact independently of any lens.

In the present illustration, a transparent plate is shown at 25 removably held by a spring ring 26 against an internal shoulder 27 in the back of the lens ring, said plate carrying numbers 28.

The numbers or indicia are easily changed by taking out the spring ring 26 and replacing the marker plate with a different marker. The lens ring and marker holder are readily removable from the supporting sleeve and can be rotatably adjusted to bring numbers or other markings into upright relation. The lamp can be reached from the front of the device as soon as the ring carrying the lens or other cover is removed. This feature is of great advantage, for example, in large size annunciators, where the lamps can be readily replaced from the front of the panel without having to go to the back of the panel or disturb any wiring connections. In the case of more serious difficulty, the entire unit may be quickly removed from the panel and be replaced by a perfect unit. The flange at the front end of the sleeve may be finished ornamentally to serve as an escutcheon ring and the ring of the lamp cover preferably fits back against this escutcheon ring as illustrated to enhance the ornamental appearance of the device. The sleeve may be made quite long as shown, so that it may be used with panels or supports of a great variety of thicknesses. One or any number of ventilating openings 29 may be provided in the supporting sleeve.

The device may be used in so many places, that no attempt is made to list its uses, it being evident however, as above outlined, that it is particularly suited for multiple lamp annunciators, sign boards, signal panels, elevator signals, switch boards and the like, especially where it is desirable for the signals to be placed closely together.

It should be understood further, that in view of the broad nature of the invention, the terms employed herein are to be considered in a descriptive rather than in a limiting sense, except for such limitations as may be required by the state of the prior art.

What is claimed is:

A lamp for annunciators, signal purposes and the like, comprising in combination, a generally cylindrical sleeve of a length sufficient to form a lamp housing and a holder for a lamp socket, said sleeve being externally screw-threaded and having an external flange at the front end of the same for engagement with a supporting panel, said sleeve being open at the opposite ends and having within the same an internal shoulder positioned a definite lamp-spacing distance back from the open front end of the sleeve, a two-part lamp socket consisting of companion parts of a size to fit into the open front and back ends of the sleeve and to enter into stopped relation with the opposite sides of the internal shoulder in the sleeve and whereby said socket is so positioned as to definitely locate a lamp with respect to the front end of the sleeve, socket terminals on the back of the rear piece of said two-part socket and positioned by said internal shoulder in definite relation to the rear end of the sleeve, interlocking portions on said companion parts of the lamp socket and whereby the lamp socket thus definitely positioned is secured within the sleeve in the proper relation to receive a lamp entered through the open front end of the sleeve and with the socket terminals exposed in the desired relation for wiring at the back of the sleeve, a readily removable lamp cover closing the front of the sleeve and in stopped relation with respect to the front end of the sleeve and thereby positioned in definitely spaced relation to a lamp in the socket which is definitely positioned back of the front end of the sleeve and a nut on the externally screw-threaded portion of the sleeve adapted for clamping engagement with the back of the panel in which the sleeve is mounted and whereby upon the backing off of this nut the sleeve may be removed through the front of the panel, after separation of the two part socket, with the rearward part of the socket remaining attached to its wiring at the back of the panel.

In testimony whereof I affix my signature.

HAROLD R. KIRKLAND.