Oct. 28, 1930. E. LE M. CONNELLY 1,780,004

FLASH LIGHT

Filed Dec. 23, 1926

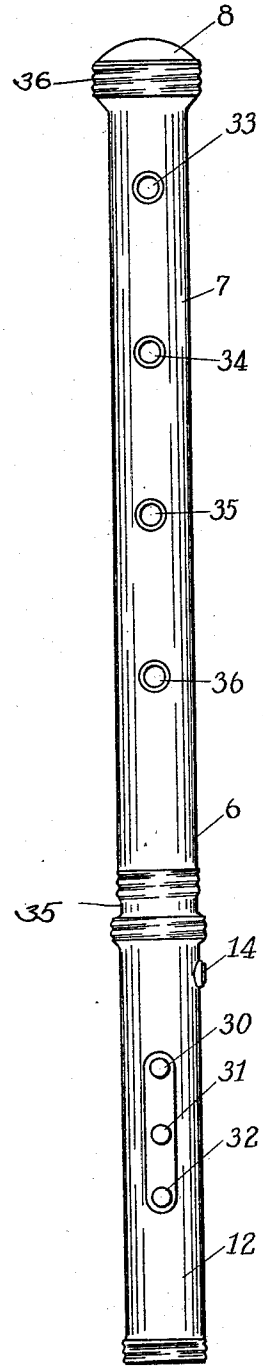


Fig. 1.

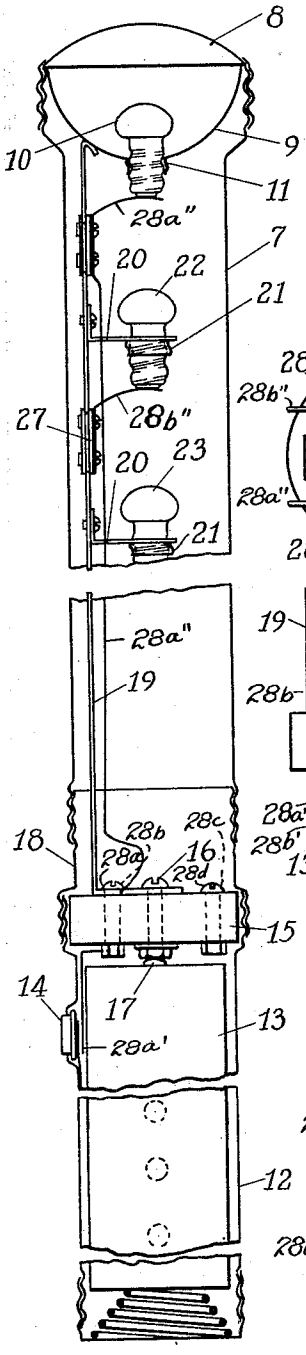


Fig. 2.

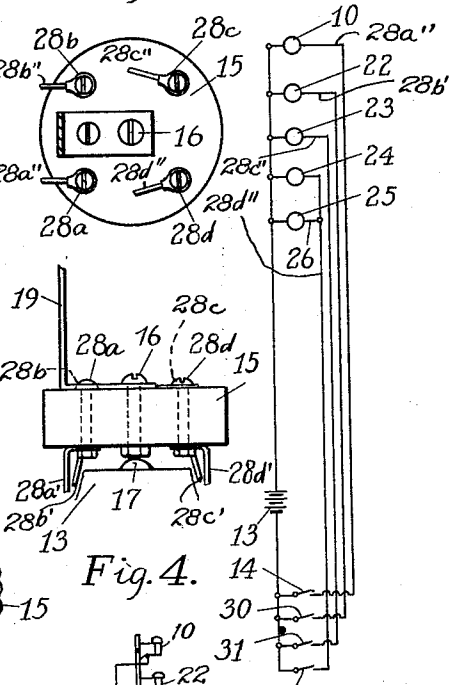


Fig. 3.

Fig. 4.

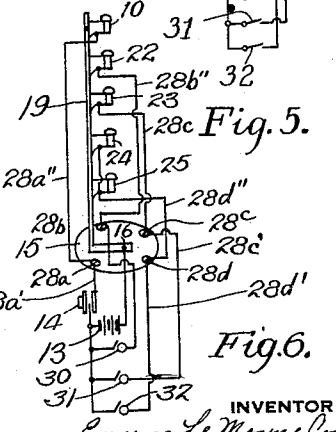


Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE

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FLASH LIGHT

Application filed December 23, 1926. Serial No. 156,544.

This invention relates to flashlights and more particularly to flashlights constructed especially for use by ushers or attachés in theatres, motion picture houses and other places of public assemblage where it may be necessary or desirable to give information to others by a silent but visible signal.

It is customary in such places, where people are continually coming and going, to have an usher in the aisle indicate the number of vacant seats in any one lot by signaling to another usher at the rear of the theatre and an object of this invention is to provide a device for this purpose which will silently and unmistakably convey the desired message.

A further object is to provide a device of the type set forth which will be simple and rugged in construction, cheap to manufacture and assemble and positive and reliable in operation.

These and other objects which will be apparent to those skilled in this particular art are accomplished by means of the invention illustrated in the accompanying drawing, wherein Figure 1 is a view in elevation of a signal flashlight constructed in accordance with one embodiment of this invention. Fig. 2 is a somewhat diagrammatic, broken, longitudinal sectional view on an enlarged scale of the device shown in Fig. 1. Figs. 3 and 4 are top plan and side elevational views, respectively, of a detail of the arrangement shown in Fig. 2 and Fig. 5 is a wiring diagram showing one method of arranging the wiring connections. Fig. 6 is a view in elevation, somewhat diagrammatic, showing the lighting system.

The particular embodiment of the present invention which has been chosen for the purposes of illustration is in the form of a standard flashlight provided with the usual light circuit controlling button for making or breaking connection between a battery contained within the casing and a light bulb associated with a lens and reflector in the end of the casing. Included within one section of the casing are a number of light bulbs which are so arranged as to be visible when lighted. Switches are provided for controlling the lighting of these bulbs and these switches are so connected to the battery and the circuits, including the various bulbs, that any desired number of the latter can be lighted so as to be visible from a distance. It will be apparent that an usher by flashing the correct number of lights can immediately and silently convey the desired message, such as the number of vacant seats to the proper person.

A flashlight embodying the illustrated form of the present invention includes a tubular casing 6 having a light-bulb enclosing section 7 which is provided in the end with the usual lens 8 and reflector 9 cooperating with the flashlight bulb 10 supported in a socket 11 electrically connected to the reflector in the usual manner. The casing also includes a battery housing 12 for receiving the usual battery 13 and having a thumb button 14 for making and breaking the circuit including the flashlight 10 as is well known in this art.

A current distributor 15 which is formed from a block of non-conducting material has a center terminal 16 engaging the center terminal 17 of the battery and is mounted within an intermediate expanded portion and distributor housing 18 connected between the battery housing 12 and the light housing 7 so as to form a part of the completed casing. The battery and the light housing are screw coupled to opposite ends of the intermediate distributor housing so that the working parts of the signal light can be readily replaced and repaired.

A metallic, current conducting, lamp supporting rod 19 is mounted upon the distributor block and electrically connected to the center terminal 16. A plurality of light supporting brackets 20 are mounted in spaced relation along the rod or bar 19 and electrically connected thereto, and each bracket is provided with a lamp socket 21 for receiving, in the present instance, the four lamps 22, 23, 24 and 25. The circuit through each of the signal lamps 10 and 22 to 25 is completed by conductors $28^{a''}$, $28^{b''}$, $28^{c''}$ and $28^{d''}$ positioned so as to engage the center base contact of each lamp. Each conductor is supported upon the current conducting rod 19 but insulated therefrom by suitable insula-

tion 27. Each conductor $28^{a''}$, $28^{b''}$, $28^{c''}$ and $28^{d''}$ is connected to its respective distributing terminal 28^{a}, 28^{b}, 28^{c} and 28^{d} of the distributor and each of these terminals extending through the distributor block 15 is connected by conductors $28^{a'}$, $28^{b'}$, $28^{c'}$ and $28^{d'}$ with each of the switches 14, 30, 31 and 32, respectively, preferably located in the battery housing 12 and so arranged as to cause current to pass through the associated conductor and lamp when closed, see Fig. 5. At least two of the lamps, in the illustrated embodiment the two lower lamps 25 and 26, are preferably connected in parallel so that operation of the single switch 32 is all that is necessary to signal the presence of two empty seats. The lamp housing 7 is provided with openings or windows 33, 34, 35 and 36 opposite the lamps 22, 23, 24 and 25, respectively, through which they are clearly visible when lighted.

The presence of a single seat is indicated by flashing one of the single lights 22 or 23 and it is apparent that this can be done by operating either of the switches controlling these respective lights, namely, switches 30 or 31, see Fig. 5. Two seats are indicated by operating the single switch 32 which passes current through the two lamps 24 and 25 connected in parallel. Three seats may be indicated by lighting any three of the lamps and this can most conveniently be done by operating the two switches 31 and 32 or 30 and 32. All four lamps can be lighted to indicate four seats by operating the three switches simultaneously. It will, of course, be understood that the flash lamp 10 is used in its ordinary manner and controlled by the usual button 14 which is independent of the signal lamps and circuits.

Since the positive terminal 17 of the battery is electrically connected to the bar 19 and thus to the reflector 9, it is necessary, to prevent a short circuit, to form the connection 35 of fiber or some other insulated material, to form the casing 6 of such material, or to provide a fiber washer at the connection 36 positioned between the casing 6 and the reflector 9.

Although I have described a particular arrangement of elements it will be apparent that various changes, additions, omissions and substitutions can be made therein without departing from the spirit of this invention or the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. A signal device having in combination a tubular casing provided with a plurality of coupled housings, the lower of said housings being provided with a series of vertically spaced switch contacts and being formed for receiving a battery therein, the intermediate of said housings being formed with shoulders for supporting a current distribution block therein, the upper of said housings being provided with a series of spaced openings, said distribution block having a rod mounted thereon extending longitudinally along said upper housing and having lamp brackets with lamps mounted thereon and disposed therealong, so that one lamp will be visible through each of the openings in said upper housing, means including said rod and brackets for conveying current through said switch contacts to said lamps from the battery, said upper and said lower housings being screw coupled to opposite ends of said intermediate housing, so that the working parts of said signal device can be readily replaced and repaired.

2. A signal device having in combination a tubular casing provided with a plurality of coupled housings, the lower of said housings being provided with a series of vertically spaced switch contacts and being formed for receiving a battery therein, an upper housing screw connected with said lower housing and provided with a series of spaced openings and an open end, a distribution block mounted between said upper and lower housing portions having a rod mounted thereon extending longitudinally along said upper housing and having lamp brackets with lamps mounted thereon and disposed therealong, so that a lamp will be visible through each of the openings in said housing and one lamp will be visible through the open end of said housing, means including said rod and brackets for conveying current through said switch contacts to said lamps from the battery.

In testimony whereof, I have hereunto subscribed my name this 21st day of December, 1926.

EUGENE L. CONNELLY.