A. C. HINCKLEY.

SIGNAL LANTERN FOR LOCOMOTIVES.

APPLICATION FILED MAY 5, 1920.

1,384,387.

Patented July 12, 1921.

2 SHEETS—SHEET 1.

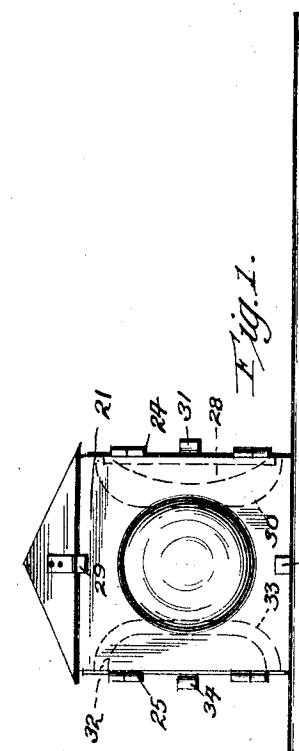


Fig. 1.

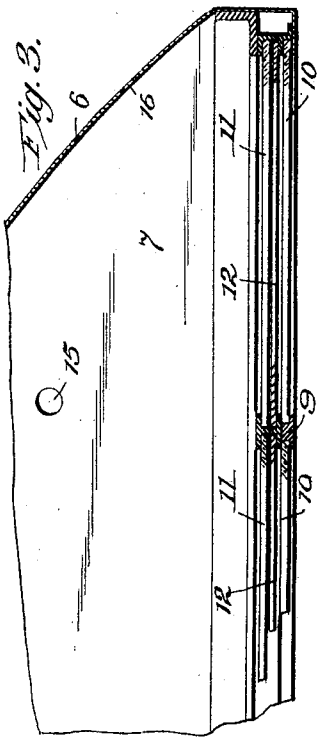


Fig. 3.

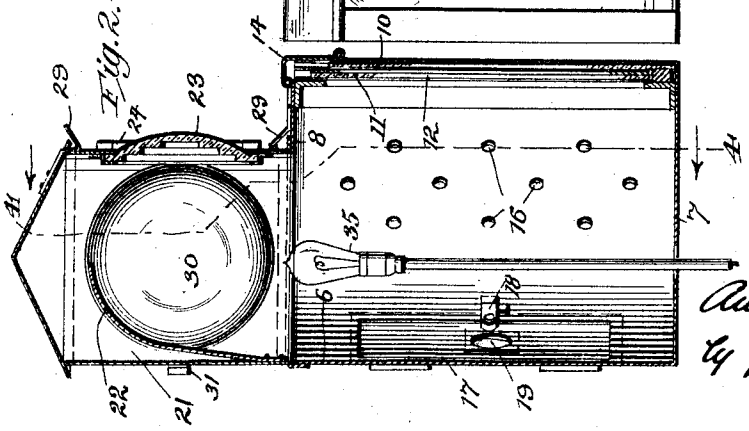


Fig. 2.

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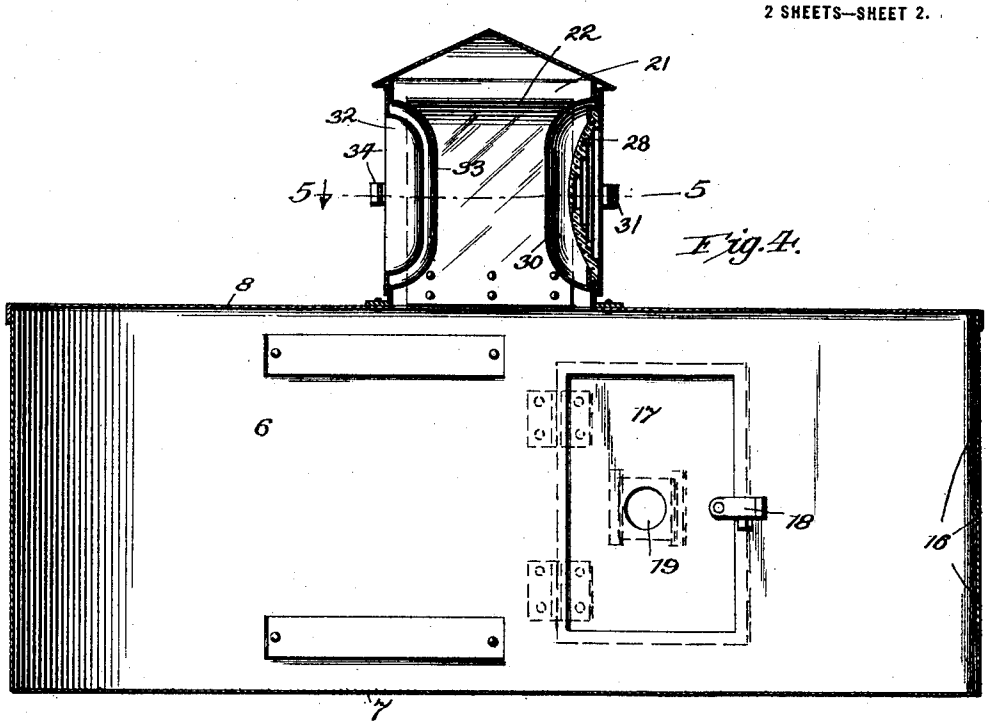


Fig. 4.

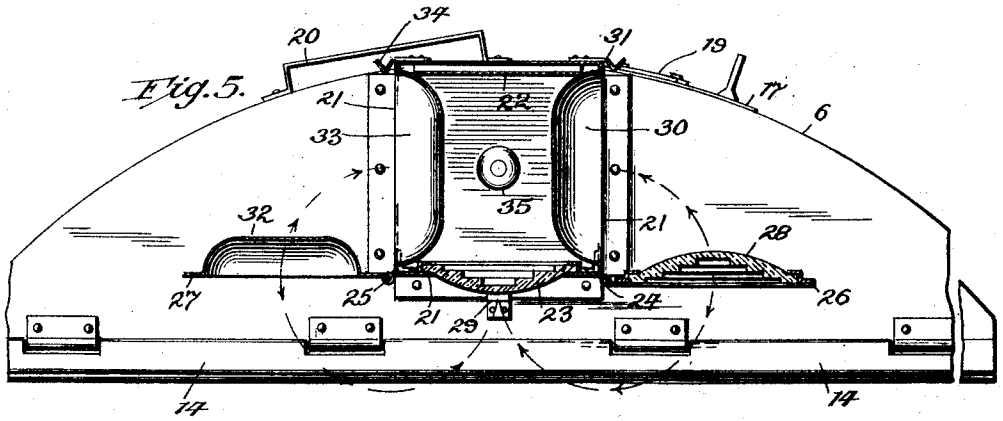


Fig. 5.

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SIGNAL-LANTERN FOR LOCOMOTIVES.

1,384,387. Specification of Letters Patent. Patented July 12, 1921.

Application filed May 5, 1920. Serial No. 379,104.

To all whom it may concern:

Be it known that I, AUGUSTUS C. HINCKLEY, a citizen of the United States, residing at Pocatello, in the county of Bannock and State of Idaho, have invented certain new and useful Improvement in Signal-Lanterns for Locomotives, of which the following is a specification.

This invention relates to signal lights for railway locomotives and its purpose is to provide to a combined classification signal-light and train number indicator which shall be simple and compact in construction and shall be subject to the minimum risk of failure in operation.

To secure the desired result I combine with a single light source a classification lamp and an illuminated changeable sign. The classification lamp has a white bullseye fixed in position and carries two hinged wings which are housed in recesses in the sides of the lamp when not in use. One wing carries a green lens which is positioned in front of the white bullseye by swinging the wing into position over the front of the lamp, and the other wing is a blind which may be positioned to blind the white bullseye completely. The changeable sign consists of a series of windows each having a rear pane of opal glass and a front pane of clear glass. Interchangeable stencil letters or numbers, each consisting of a sheet or card preferably black with the letters or numbers cut out, are inserted between the opal and clear glass panes. The letters show by transmitted light from the light source by night, and by reflected light by day.

This arrangement avoids the use of separate lights and fixtures, reduces the risk of light failures, brings the classification light and train number into desirably close proximity, and offers many incidental advantages from an operation standpoint. As an incidental feature I provide means by which the engine crew may assure themselves at all times that the light is lighted.

An embodiment of the invention which has proved successful in use is shown in the accompanying drawings, in which:

Figure 1 is a front elevation of the complete device;

Fig. 2 is a vertical section;

Fig. 3 is an enlarged fragmentary section on the line 3—3 of Fig. 1;

Fig. 4 is a section on the line 4—4 of Fig. 2;

Fig. 5 is a section on the line 5—5 of Fig. 4, showing lens 28 and mask 32 swung out to illustrate their construction.

The main portion of the lamp case in which the light source (preferably an incandescent electric light) is housed, is formed of sheet metal suitably braced. In plan it closely approximates a segment of a circle. It thus includes a curved back wall 6, bottom 7 and top 8. The front is formed with a series of juxtaposed windows, five being shown, each defined by the slotted side pieces 9 which confine glass panes, two for each window. The front panes 10 are closely confined in their slots so as to exclude water, and are of clear glass. The rear panes 11 are of opal or white translucent glass, and the slots which confine them are so formed as to receive in front of the opal glass 11 and behind the clear glass 10, the stencil sheets 12. As already stated, these are removable and interchangeable and each is black, or of a color contrasting sharply with the opal glass which it overlies. Each stencil sheet or card 12 has a transparent letter, number, or other symbol 13, cut or otherwise formed in it. This symbol is consequently legible by night or day as already explained.

A guard strip 14 is hinged to the top 8 and when swung down serves to exclude water. When swung up it exposes the upper ends of the stencil cards. Since these project above the upper edges of the panes 10 they may readily be withdrawn and replaced in any desired arrangement. The bottom of the case is provided with ventilating holes 15, and the curved back at the end near the engine cab is provided with small holes 16 to enable the crew to ascertain whether the signal is lighted. A hinged door 17 with latch 18 and peep-hole 19 is mounted on the curved back of the case. A bracket to hold a case for the stencil sheets 12, when not in use is shown at 20.

The case 21 of the classification lamp is mounted on the top 8 over an opening formed in said top to permit said lamp to be lighted by the same light source as the number indicator. This light source is preferably an incandescent electric light 35 placed directly below the opening above mentioned, and directly behind the stencil-receiving windows. The curved back 6 serves as a reflector to distribute the light over the entire series of windows, and a curved reflector 22 throws the light passing upward through

the top of the case forward through the lens 23. The lens 23 is clear glass, thus showing a white light. Hinged at 24 and 25 to the forward edges of the case 21 are two wings 26 and 27. The wing 26 carries a green lens 28 and may be swung over the front of case 21 so as to position said lens 28 over the lens 23. It is retained in this position by latches 29. When not in use the lens 28 is housed in a recess 30 in the side of case 21, by swinging wing 26 back so as to engage latch 31.

Wing 27 is a blind for lens 23 and is formed with a boss 32 to allow it to fit tightly against the front of case 21 and yet clear the lens 23. When not in use it is housed in a recess 33 in the side of case 21, and is retained by the latch 34. When in position to mask the lens 23 it is held by latches 29.

This structure has special advantages for use on locomotives. It brings the classification signal and the train number indicator close together, and allows both to be brightly illuminated by a single light source. It reduces maintenance and relieves the crew of the necessity of watching separate classification and number indicator lights to see that they are lighted. It offers great convenience in setting the classification signal and train number indicator, and facilitates rapid changing when necessary.

Ordinarily a locomotive will be equipped with two of the devices herein described, one being placed on each side of the engine. These two devices are identical except for the location of the glow holes 16, which as stated are to be placed in that end which is toward the cab.

Having thus described my invention what I claim is:—

A signal lantern for locomotives, comprising in combination, a casing formed with a relatively narrow upward extension and a relatively wide main portion; a changeable exhibitor of the interchangeable stencil type mounted in the main portion of said casing; a clear lens mounted in said upward extension immediately above said changeable exhibitor; a color screen for said lens hinged to one corner of said upward extension; a mask for said lens hinged to another corner of said extension; said screen and mask being capable of swinging to positions over said lens and also to inoperative positions against the sides of said upward extension; latches serving to hold said screen and mask both in their operative position over said lens and their inoperative positions against the sides of said extension; a light source; and reflecting means serving to project light from said source through said exhibitor and lens.

In testimony whereof I have signed my name to this specification.

AUGUSTUS C. HINCKLEY.