

(No Model.)

F. P. COPPER & A. BAIR.

SIGNAL LANTERN.

No. 345,575.

Patented July 13, 1886.

Fig. 1.

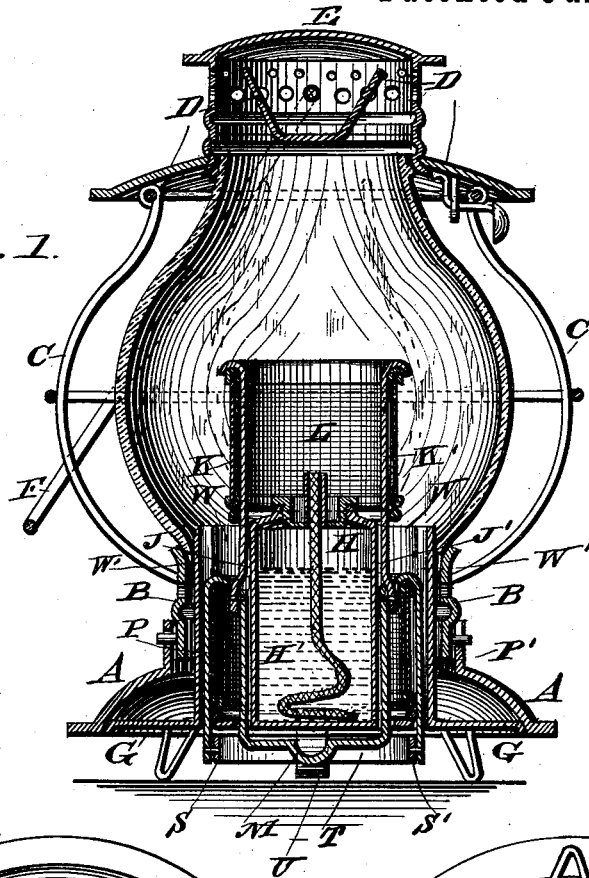


Fig. 2.

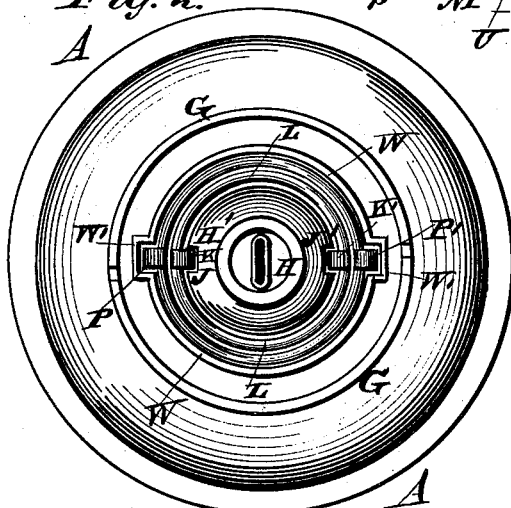
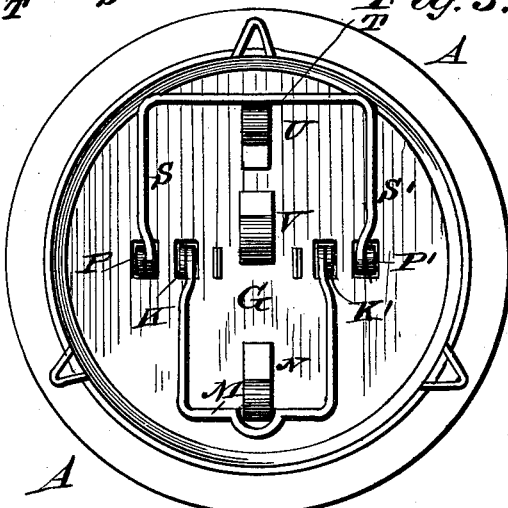


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK P. COPPER AND ALVIN BAIR, OF TIFFIN, OHIO.

SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 345,575, dated July 13, 1886.

Application filed April 21, 1886. Serial No. 199,649. (No model.)

To all whom it may concern:

Be it known that we, FRANK P. COPPER and ALVIN BAIR, citizens of the United States, residents of Tiffin, in the county of Seneca and State of Ohio, have invented certain new and useful Improvements in Signals; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a vertical section of a signal as applied to a lantern. Fig. 2 is a top plan view of the base, and Fig. 3 is a bottom plan view of the same.

Our invention relates to railroad-signals designed for use in lanterns, and for all other signal purposes—such as at switches, railroad-crossings, signals of all kinds, &c.; and it consists in the construction and novel combination of parts, as hereinafter described, and pointed out in the claims.

In illustrating and describing our invention we have shown it applied to a lantern, as such an illustration of its use will enable persons skilled in the art to which our invention appertains to construct and use the same in other places.

Referring by letter to the accompanying drawings, A designates the body of the lantern, which is of the construction usually employed by railroad men, with the exceptions particularly pointed out hereinafter.

B is the perforated base which supports the lamp-chimney, and is connected by the wire guard-frame C to the annular deflector D at the top of the chimney.

Above the deflector D, and secured thereon, is the ventilator E, and through this ventilator the bail F, for carrying the lantern, passes.

G is the detachable base of the lantern, which is secured to the perforated base B by the bayonet-fastenings usually employed in this class of lanterns.

H designates the lamp, which consists of the oil-chamber H', into which the wick-tube is secured in the usual manner.

The oil-chamber H' is provided with vertical grooves J J' in its outer wall, said vertical

grooves being diametrically opposite to each other, and in these grooves J J' vertical arms K K', which hold a colored-glass tube, L, slide, when operated by the bail M, hinged to the lower ends of said arms K K', said bail M being pushed upwardly to project said glass tube L, and pulled down upon to retract or lower said tube L. When this tube L is retracted or drawn down so as not to surround the flame of the burner, the hinged bail is turned up against the bottom of the lamp and engages a spring-catch, N, secured upon the bottom face of the lamp.

Outside of and encircling the inner colored-glass tube, L, which we will make the danger signal, (green,) is a second colored-glass signal, (red,) which is secured by vertical arms P P', which pass along the outside of said tube and clamp over its upper edges, the lower ends of said vertical arms P P' being connected to the upper ends of the arms S S' of the larger outer bail, T, by pivot connections, so that this bail, too, may be turned up out of the way and brought into engagement with a spring-catch, U, on the under face of the bottom of the lamp to hold the bail out of the way when this outer cylinder is drawn down from around the flame. A third spring-catch, V, is secured to the under face of the bottom of the lamp, its free end being turned up immediately below the central point of the bottom of the lamp, so that when either of the hinged bails are pushed up in their respective slots, *a a* or *b b*, said bails will engage said spring-catch V and will hold the bail and the proper cylinder in the elevated position, thereby determining the color of the signal desired to be displayed.

W is a stationary cylinder, which surrounds the outer sliding cylinder and is provided with vertical guides W' W' in the inner face of its wall, at diametrically-opposite points therein, and in these grooves the vertical arms P P', slide when the outer sliding tube is pushed up or pulled down around the wick-tube.

Instead of being applied to a hand-lantern, it is obvious that this same construction of colored-glass sliding tubes may be applied to the lights at railroad-crossings and at switches, and in all other places where signals are needed.

Having described this invention, what we

claim, and desire to secure by Letters Patent, is—

1. The combination, in a signal-light, of a base and an oil-holder, a spring-catch centrally
5 colored-glass slide exterior to the flame, a hinged arranged on the under side of the base, a col-
bail secured to the slide, slots in the base for the passage of the bail, and a catch, as N,
whereby the said bail may be engaged by one
10 of the catches when the colored slide is in an elevated and a depressed position, substan-
tially as specified.

2. The combination, in a lantern, of the ex-
ternal fixed tube having vertical guides and
15 the oil-holder, also having guides, the colored-
glass slide-tubes adapted to move in said
guides, the hinged bails secured to the said
slides, the slots for the passage of the bail,

and the catch on the under side of the slides
for holding the slides in an extended position, 20
substantially as specified.

3. The combination, in a lantern, of the oil-
holder, the base having the catches N U V on
its under side, as described, the external fixed
tube having diametrical vertical guides, the 25
vertical guides in the oil-holder, the col-
ored-glass slides, and the hinged arms secured
to the slides, and the slots for the passage of
the said arms, substantially as specified.

In testimony whereof we affix our signatures 30
in presence of two witnesses.

FRANK P. COPPER.
ALVIN BAIR.

Witnesses:

B. F. MYERS,
A. E. STEINBRICK.