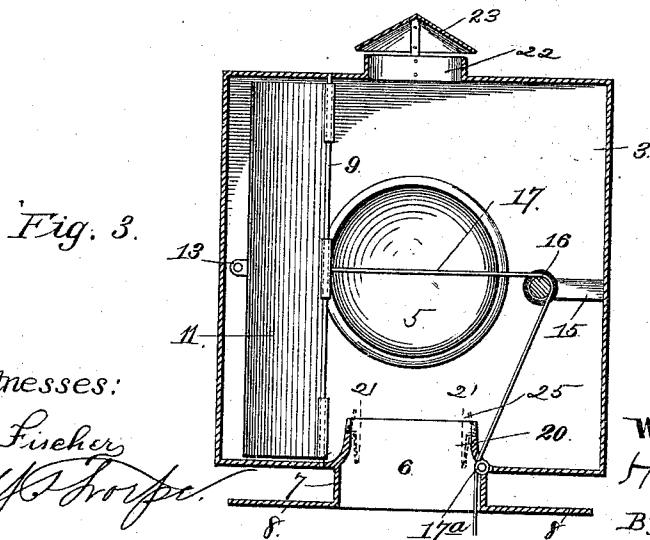
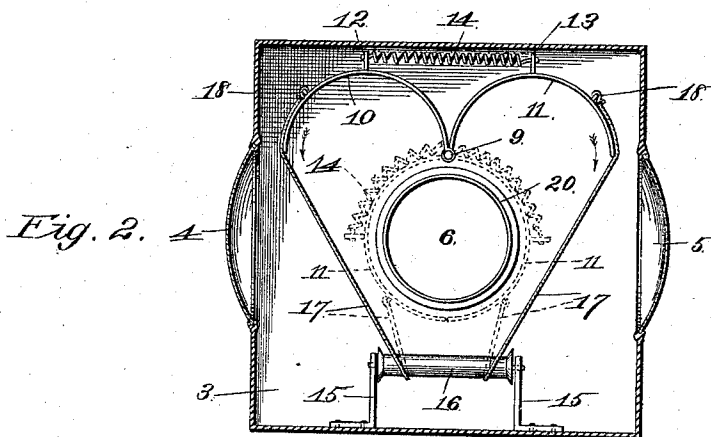
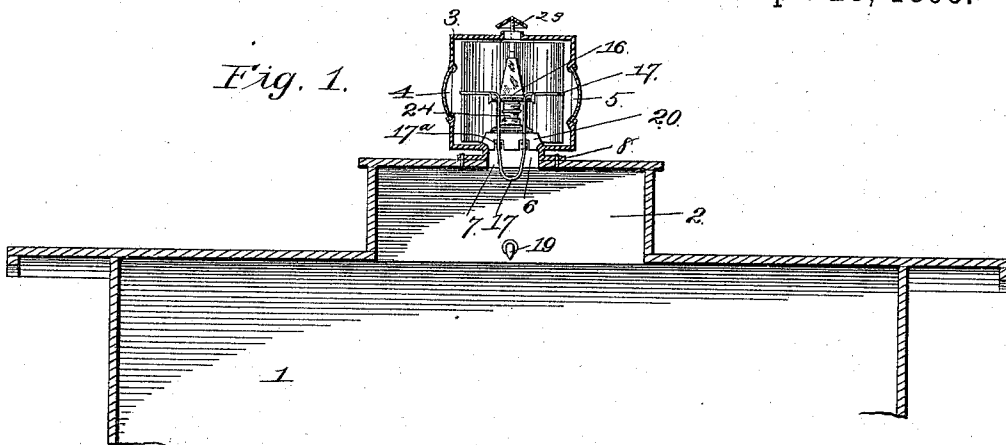


(No Model.)

W. H. EDWARDS.
DANGER SIGNAL FOR RAILWAY TRAINS.

No. 537,918.

Patented Apr. 23, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. EDWARDS, OF BELLEVILLE, KANSAS.

DANGER-SIGNAL FOR RAILWAY-TRAINS.

SPECIFICATION forming part of Letters Patent No. 537,918, dated April 23, 1895.

Application filed May 28, 1894. Serial No. 512,622. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. EDWARDS, of Belleville, Republic county, Kansas, have invented certain new and useful Improvements in Danger-Signals for Railway-Trains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to train signals, and more particularly to that class of signals which are employed on trains as a means of visual communication.

Previous to my invention, under the rules and regulations of certain railway systems, when the signal lamp was carried in the cupola of the caboose, it has been necessary, when the train was side-tracked, to remove the lamp, extinguish the light, and replace the lamp in the cupola, and this operation is attended by considerable inconvenience. It has also been necessary to remove the lamp, light it and replace it when the train resumes its journey.

To obviate the inconvenience and loss of time involved in the operation above described, my invention is ordained.

With this object in view, the invention consists in certain peculiar and novel features of construction and combinations of parts, as hereinafter described and claimed.

In order that the invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a signal device constructed in accordance with my invention, and showing it mounted operatively in position upon the cupola of the train caboose. Fig. 2 is a horizontal sectional view on an enlarged scale of the signal device. Fig. 3 is a vertical central sectional view.

In the said drawings, 1 designates the caboose and 2 the cupola thereof.

3 designates a casing, preferably rectangular, which is provided at its opposite ends with openings in which are secured the colored transparent plates 4 and 5; said plates showing a red light, as hereinafter explained, when the train of which the caboose forms a part is moving upon the main track. The casing 3 is provided with a central and circular opening 6 in its bottom, and marginally depending from said opening, is the annular flange

7, and projecting horizontally outward from the lower portion of the flange 7, is the flange 8, which is secured permanently upon the cupola of the caboose and surrounds the opening in the top wall thereof, which registers with the opening 6. Secured vertically in the casing 3, and adjacent to and at one side of the opening 6, is a rod 9, and hinged at their inner margins to said rod, and adapted to swing in a horizontal plane, are the semi-cylindrical blinds or covers 10 and 11; these semi-cylindrical blinds or covers being sufficiently large to completely encircle or surround the opening 6, for a purpose hereinafter explained. Projecting from the rear or convex side of the blind 10 is a lug 12, and projecting from the rear side of the blind 11 is a lug 13, and these lugs are connected by a retracting spring 14, so that when not expanded by an overcoming force, said spring will hold the blinds in their open position, as shown in full lines, Fig. 2. Projecting inwardly from the vertical wall of the casing, which is situated at the opposite side of the opening 6 from that occupied by the rod 9, are the brackets 15, and journaled in said brackets is the anti-friction roller 16. A cord or flexible connection 17 has its opposite ends secured to pins 18 projecting from the outer side of the blinds 10 and 11, adjacent to their free margins, and said cord is guided over the anti-friction roller 16, and thence extending downwardly, is guided over the anti-friction rollers 17^a, and extending pendently downward therefrom is adapted to have its loop end or middle engaged by or engaging the downwardly disposed hook 19, carried by the caboose in any suitable position. The anti-friction rollers 17^a are journaled in openings formed at the junction of the upwardly projecting and annular flange 20 with the bottom of the casing at the margin of the opening 6; which opening the flange 20 surrounds, and this flange, in its upper margin, is notched, as shown at 21. Vertically above the opening 6, an opening 22 is formed through the top wall of the casing, so as to provide sufficient draft to support combustion, and this opening is protected by a hood or deflector 23, of inverted-V shape, so that cinders and other flying particles will be prevented entering the casing, and possibly breaking or injuring the signal mechanism.

The lamp 24, which is of any ordinary or preferred construction, is introduced into the casing by slipping it vertically upward through the opening 6, and may be provided
5 with spring catches 25, as shown in dotted lines, Fig. 3, to engage the notches 21, or may be supported vertically in position upon the flange 20 by any other suitable means which will allow of the lamp being placed in and re-
10 moved from position easily and expeditiously.

In the operation of the device, when the train is traveling on the main track, the lamp occupies the position shown in Fig. 1, and the blinds 10 and 11 are open, so that the red light
15 at either end may be observed at all times. When the train is side-tracked for any purpose, according to railway requirements, with the ordinary signal apparatus, the light must be extinguished so as not to shine through the
20 red transparent plates 4 and 5. With my device, however, it is necessary only to pull down upon the cord or flexible connection 17 and thereby cause the pivotal operation of blinds 10 and 11 in the direction indicated by the ar-
25 rows Fig. 2, until the free margins of the said blinds meet, and the lamp is entirely closed from view, as shown in dotted lines, Fig. 2, and by engaging the lower end of the cord or flexible connection 17 with the hook 19, the
30 blinds are held in such closed position. When the train resumes its journey, the cord is disengaged from the hook 19, and the spring 14 retracts and operates the blinds to their open position, so that the lights may be observed
35 through either end of the casing 3.

While I have shown this device as consisting essentially of the hinged and co-acting semicylindrical blinds, it will be apparent that with slight changes in construction these blinds may be made to operate independently
40 of each other, or that the same object, viz: the shutting off of the light from transparent plates, may be accomplished by sliding plates within the casing, but I prefer the form herein described and illustrated.

From the foregoing, it will be apparent that I have produced a signal device which is simple, durable, and inexpensive of construction, and which may be operated easily and expeditiously.
45 50

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a train signal device, the combination with a casing located upon the cupola of a car, 55 said cupola having an opening communicating with the interior of the casing, transparent plates in opposite ends of said casing, through which shines a light within said casing, a rod, semi-circular blinds hinged upon
60 the same, a spring connecting the blinds, and a cord attached to each of them, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. EDWARDS.

Witnesses:

CHAS. H. MILES,
G. Y. THORPE.