

K. G. F. WIKSTRÖM.
HAND SIGNAL LANTERN.
APPLICATION FILED SEPT. 27, 1916.

1,233,631.

Patented July 17, 1917.

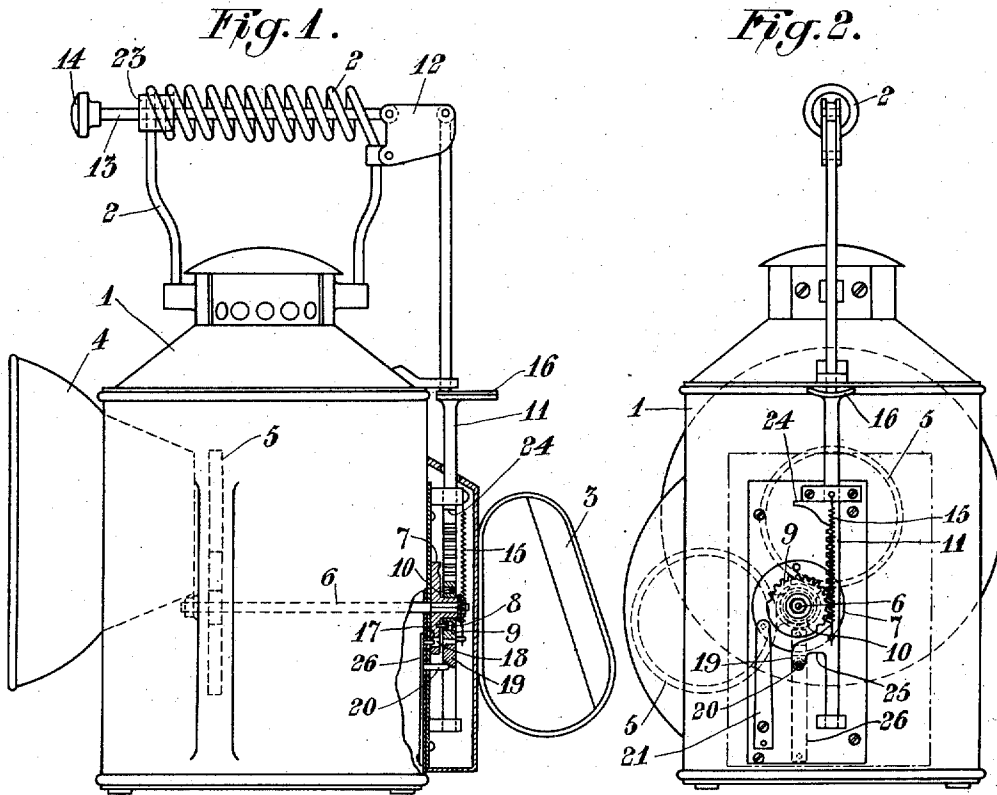


Fig. 3.

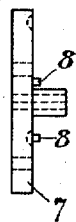


Fig. 4.

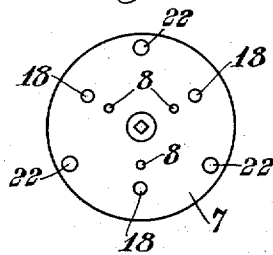
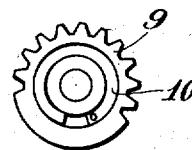


Fig. 5.



Inventor:

Karl G. F. Wikström

By:

George Bayne Jones.

UNITED STATES PATENT OFFICE.

KARL GUSTAF FREDRIK WIKSTRÖM, OF ÖREBRO, SWEDEN, ASSIGNOR TO AKTIEBOLAGET
CARL A. CARLSON, OF STOCKHOLM, SWEDEN.

HAND SIGNAL-LANTERN.

1,233,631.

Specification of Letters Patent.

Patented July 17, 1917.

Application filed September 27, 1916. Serial No. 122,346.

To all whom it may concern:

Be it known that I, KARL GUSTAF FREDRIK WIKSTRÖM, a subject of the King of Sweden, residing at Örebro, in the Kingdom of Sweden, have invented a new and useful Improvement in Hand Signal-Lanterns, of which the following is a specification.

The present invention relates to such hand signal lanterns, which are provided with differently colored disks of glass or the like secured to a common shaft, by the turning of which the disks may be alternately adjusted in front of the opening for the light, in order to give the desired colored light signal. The main feature of the invention consists in this that the adjustment into position of the colored glass disks is effected by means of a switching mechanism arranged to be operated from the top handle, by means of which the lantern is carried, as well as from the side handle by which the lantern is ordinarily held when signals are given. The advantage is hereby attained that it is always possible to give a signal without loss of time, even when the lantern is carried by the top handle, without it being necessary, as has heretofore been the case, to seize the lantern by the side handle thus causing a waste of precious time. This possibility of rapid signaling is particularly important when switching trains and cars in railroad yards.

In the accompanying drawing an embodiment of the invention is illustrated. Figure 1 shows a signal lantern according to the invention viewed from the side and partly in section, and Fig. 2 shows the same from the rear, the cover for the disk-adjusting mechanism having been removed. Fig. 3 shows an edge view and Fig. 4 a side view of a disk secured to the shaft of the colored glass disks, and Fig. 5 shows a side view of a pinion actuating the said disk.

The lantern 1 is provided in the usual manner with a carrying or top handle 2, a side handle 3, and a reflector 4, covered by a glass pane. At the inside opening of the reflector there are two disks 5 of transparent, differently colored material, for instance red and green glass, secured to a common shaft 6 and located in the same plane. These disks are so placed on the shaft that the light is changed for every one third turn of the shaft, for instance from

red to green and to white, this latter color when none of the disks cover the light opening in the reflector so that the light from the lamp inside the lantern radiates directly through the opening. In order to effect this one third turn of the shaft from the outside, the shaft is extended through the rear wall of the lantern, where a disk 7 is secured to the same, which disk is provided with three projecting lugs or studs 8 on its outside surface (Figs. 3 and 4) at the same distance from the shaft and spaced at 120° from each other. Outside of this disk 7 a pinion 9 is loosely mounted on the shaft and is provided on its inside with a springy projection 10 (shown in Fig. 5 as an annular spring). When turning the pinion 9 in one direction this projection 10 will engage one of the studs 8 and force the disk 7 to turn with the pinion, while when the pinion is turning in the opposite direction the springy projection 10 will be pressed aside by the studs 8, so that the disk 7 is not actuated but remains stationary. A rack 11 engages the pinion 9 and extends upward to the top handle 2 where it is pivotally connected at its upper end to a piece 12 pivoted to the handle 2. To this piece 12 a bar 13 is pivoted which passes through the hollow top handle 2 and is provided at its other end with a button 14, which may be easily reached with the thumb of the hand holding the lantern. Owing to this arrangement, when pressing the button 14 the rack 11 will be moved downward and turn the pinion 9, which then actuates the disk 7 by means of its springy projection 10 so that this disk 7 with the shaft 6 and the colored glass disks 5 also become turned. The shaft 6 turns one third of a revolution for each complete downward movement of the rack 11. When the pressure on the button is removed, the rack 11 resumes its previous position actuated by a spring 15 secured at one end to the wall of the lantern and at its other end to the rack 11 in such manner that it becomes stretched when the rack 11 is pressed downward. The downward movement of the rack 11 may also be effected from the side handle 3 by pressing with the thumb on a lug 16 on the rack above the handle 3. The disk 7 and the shaft 6 are secured in certain positions corresponding to the various positions of the colored disks 5 in front of the light open-

ing by means of a spring-actuated stud 17 which enters one of three corresponding holes 18 in the disk 7. When the rack 11 is moved downward this connection is disengaged by a lug 19 on the rack engaging a projection 20 on the spring 26 of the stud 17 thus pressing the spring backward and the stud 17 out of engagement with the disk 7, so that the disk may turn with the pinion 9. When the lug 19 has passed the projection 20 the stud 17 will again be pressed against the disk 7 and will slide on the same until it snaps into the next hole 18, when the rack 11 has reached the limit of its downward movement. When the rack 11 is retracted by the spring 15 the lug 19 will again press the projection 20 backward so that the stud 17 moves out of the hole 18, and the disk 7 is then free to move with the pinion owing to the friction against the same. In order to prevent this backward movement of the disk 7 a spring 21 presses against the disk and in the positions of rest of the disk 7 it enters with its rounded end into corresponding shallow recesses 22 in the disk and secures the same against undue movement. In order to limit the rack to only the necessary movement for the partial rotation of the glass disks, suitable shoulders or stops 23, 24, 25 may be provided at the handle and on the rack. In addition the pinion, as shown in Fig. 5, may be provided with teeth on such part of the circumference only as corresponds to the length of the stroke of the rack.

I claim:

1. In a hand signal lantern provided with

a top handle and a side handle, the combination of a rotatable shaft, glass disks secured to the said shaft and adapted to be rotated opposite the light opening of the lantern, a push button rod journaled in the top handle, a bell crank lever one arm of which is pivotally connected to the push button rod, another rod journaled adjacent to the side handle and pivotally connected to the other arm of the bell crank lever, a finger piece secured to said rod, a tooth rack on said second rod, a pinion rotatably mounted on the said shaft and meshing with said tooth rack, and a ratchet device between said pinion and the shaft, substantially as and for the purpose set forth.

2. In a hand signal lantern provided with a top handle and a side handle, the combination of a rotatable shaft, glass disks secured to the said shaft and adapted to be rotated opposite the light opening of the lantern, a push button rod journaled in the top handle, a bell crank lever one arm of which is pivotally connected to the push button rod, another rod journaled adjacent to the side handle and pivotally connected to the other arm of the bell crank lever, a finger piece secured to said rod, a tooth rack on said second rod, a pinion rotatably mounted on the said shaft and meshing with said tooth rack, a resilient pawl on said pinion, a disk secured to the said shaft, and studs secured to said disk so as to be engaged by said pawl at one direction of rotation of the said pinion, substantially as and for the purpose set forth.

KARL GUSTAF FREDRIK WIKSTRÖM.

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