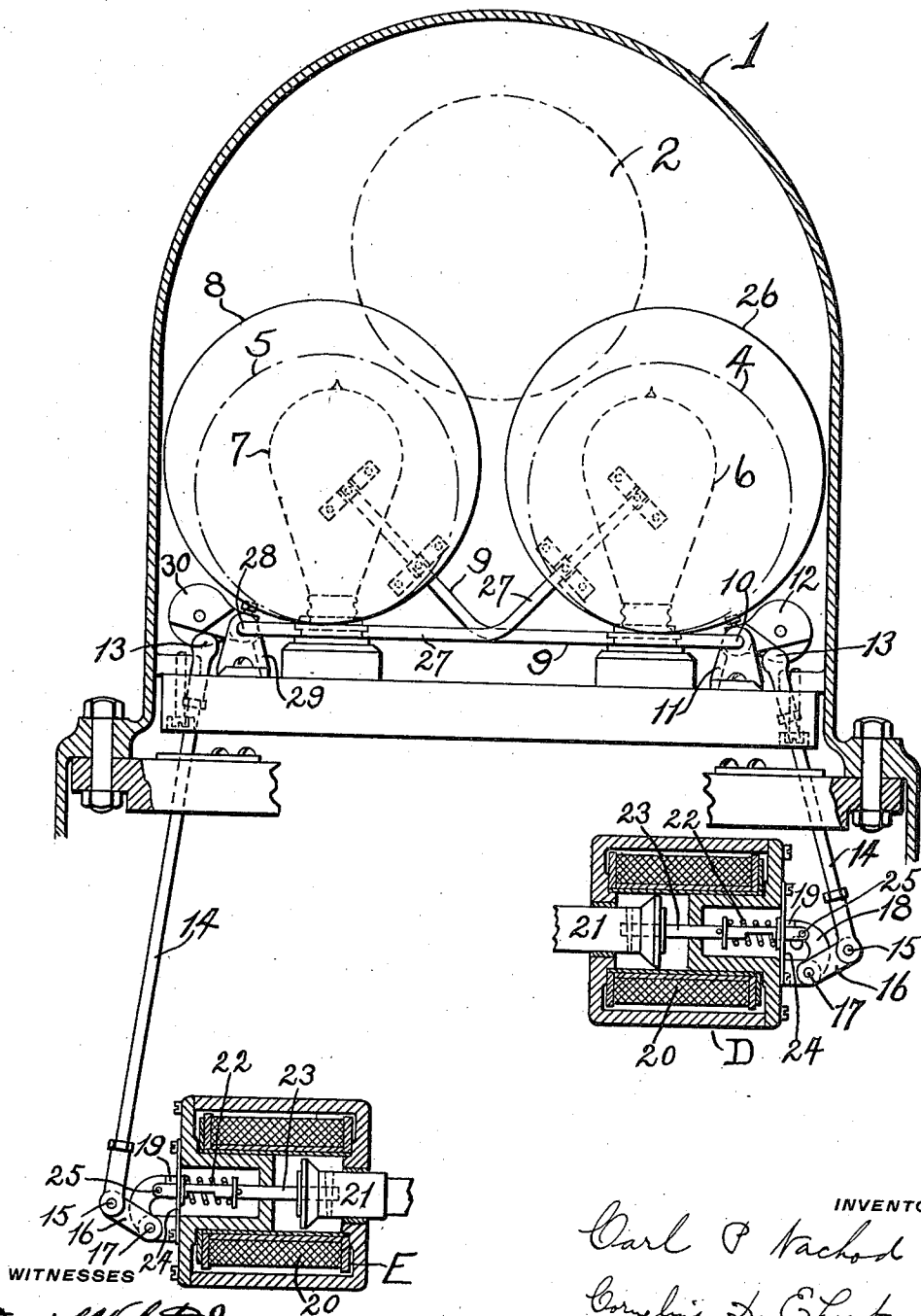


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 SIGNALING APPARATUS.
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997,692.

Patented July 11, 1911.



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SIGNALING APPARATUS.

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To all whom it may concern:

Be it known that I, CARL P. NACHOD, a citizen of the United States, residing in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Signaling Apparatus, of which the following is a specification.

My invention relates to a signaling apparatus, and more particularly to a signaling apparatus for displaying a signal or signals for indicating the condition of a block or track of a railway or kindred system.

More particularly my invention relates to means for displaying light as well as disk or semaphore signals, particularly with regard to the opening or openings and the co-operation therewith of the light and disk or semaphore signals.

My invention relates to the features hereinafter described and claimed.

For an illustration of one of the forms my invention may take, reference is to be had to the accompanying drawing, in which a vertical sectional view, some parts in section, of signaling apparatus embodying my invention, is shown.

A signal box or casing 1 is provided with an opening 2, before which the disk or semaphore signals appear when they are giving a signal indication. As indicated by the dot and dash lines 4 and 5, other openings are provided in the casing and opposite to each of these openings is disposed a light signal, such as incandescent electric lamps 6 and 7.

The disk or semaphore 8 is supported upon the rod 9 pivoted at 10 in a bracket 11, the rod 9 carrying to the right of its pivot 10 a weight member 12 which, or any suitable extension of the rod 9, is engaged on its under side by the upper end 13 of the rod 14 pivoted at 15 to one arm 16 of a bell crank lever pivoted at 17, and whose other arm consists of the arms or levers 18 having the wings 19, the pivotal support 17 being upon the housing or jacket of an electro-magnet D having the winding 20 and the movable armature or core member 21 shown in unattracted position and normally held in that position by the spring 22 surrounding the rod 23 attached to the armature or core member 21. The spring 22 thrusts at one end against the plate 24 and at its other end against a transverse collar held by a pin carried by the rod 23. The rod 23 extends out-

wardly through the plate 24 and carries at its outer end a transversely extending pin 25 which, when the magnet D is deenergized and the spring 22 moves the parts toward the left, engages the wings 19 carried by the bell crank, to push upwardly the rod 14 to hold the semaphore or disk 8 in its normal position as shown.

The second disk or semaphore 26 is supported upon the rod 27 pivoted at 28 in the bracket 29, and to the right of said pivot 28 is a weight member 30 attached to the rod 29. Associated with the electro-magnet E are parts similar to those associated with electro-magnet D for controlling the disk or semaphore 26, such parts bearing like reference characters.

The operation is as follows: The disk or semaphore 8 in its normal position intervenes between the light signal 7 and its associated opening 5. When the electro-magnet D is energized, in response to suitable control exercised by a moving car or train, its armature or core member 21 is attracted toward the right, thus compressing the spring 22 and moving the pin 18 to the right away from the wings or ears 19. Accordingly, the rod 14 descends and is removed from engagement with the weight member 12 or any other part associated with the rod 9. Accordingly, the weight 12 descends and rotates the disk or semaphore 8 in a clockwise direction about its pivot 10, removing the disk 8 from between the light 7 and its opening 5, and brings the disk 8 to display position in front of opening 2. When the electro-magnet D is deenergized, the spring 22 moves the core or armature member 21 toward the left, causing the pin 18 to engage the ears or wings 19 of the bell crank, rotating the bell crank in a counter-clockwise direction about its pivot 17, thus lifting the rod 14 and overcoming the effect of the weight 12 and moving the disk away from opening 2 and to its normal position between the light 7 and its corresponding opening 5.

The disk 8 may, for example, be a white signal and the lamp or light signal 7 may correspondingly be a white light signal. It follows, therefore, that when the magnet D is energized a white disk is displayed at opening 2 after its removal from between the white light 7 and its opening 5 so that both a white disk and a white light are dis-

played. Similarly, when magnet E is energized its associated rod 14 descends and is removed from opposition to the weight 30, with the result that the red, for example, disk or semaphore 16 is removed from between the red, for example, light 6 and its associated opening 4, and is displayed at opening 2. Upon deenergization of the magnet E, its spring 22 restores the parts to normal position. It is apparent, therefore, that a plurality of disk or semaphore and light signals are provided and so arranged, disposed and operated that the disk or semaphore signals are adapted to appear at one and the same opening one at a time and to be removed from between a corresponding light signal and its associated opening.

This application is a division from my prior application Serial No. 457520.

What I claim is:

1. Signaling apparatus comprising a casing, an opening therein, a plurality of disks within said casing adapted to be displayed at said opening one at a time, a plurality of light signals within said casing, a further opening in said casing for each light signal, each disk intervening in one of its positions between a light signal and the opening for said light signal, said disks inclosed by said casing for all indicating positions.

2. Signaling apparatus comprising a casing, an opening therein, a plurality of disks pivoted within said casing on opposite sides of said opening and adapted to be displayed at said opening one at a time, a plurality of light signals within said casing, and a further opening in said casing for each light signal, each disk intervening in one of its positions between a light signal and its opening, said disks inclosed by said casing for all indicating positions.

3. Signaling apparatus comprising a casing, three openings in the same wall of said casing, a lamp signal at each of two of said openings, a pair of disks adapted to be displayed at the other of said openings one at a time, and adapted to intervene one between each of said lamp signals and its opening, and a pivotal support for each disk disposed approximate the lamp signal opening controlled by the other disk.

4. Signaling apparatus comprising a casing having a display opening therein, a pair of openings disposed below said opening and to either side thereof, a lamp signal opposite each of said last mentioned openings, a disk pivoted approximate each of said last mentioned openings and adapted to intervene between the remote lamp signal and its opening, said disks adapted to appear one at a time at said first mentioned opening, and inclosed in said casing for all indicating positions.

5. Signaling apparatus comprising a casing having a display opening therein near one end thereof, a supporting member in the end of said casing opposite said display opening, a pair of signal lights, an opening in said casing for each of said signal lights, disks pivoted on said supporting member and each adapted to intervene between a signal light and its opening, said disks adapted to be displayed at said display opening one at a time, said signal lights disposed upon said supporting member.

In testimony whereof I have hereunto affixed my signature in the presence of the two subscribing witnesses.

CARL P. NACHOD.

Witnesses:

ELEANOR T. McCALL,
ANNA E. STEINBOCK.