D. B. UTT.

SIGNAL.

APPLICATION FILED MAY 12, 1908.

924,403.

Patented June 8, 1909.

2 SHEETS—SHEET 1.

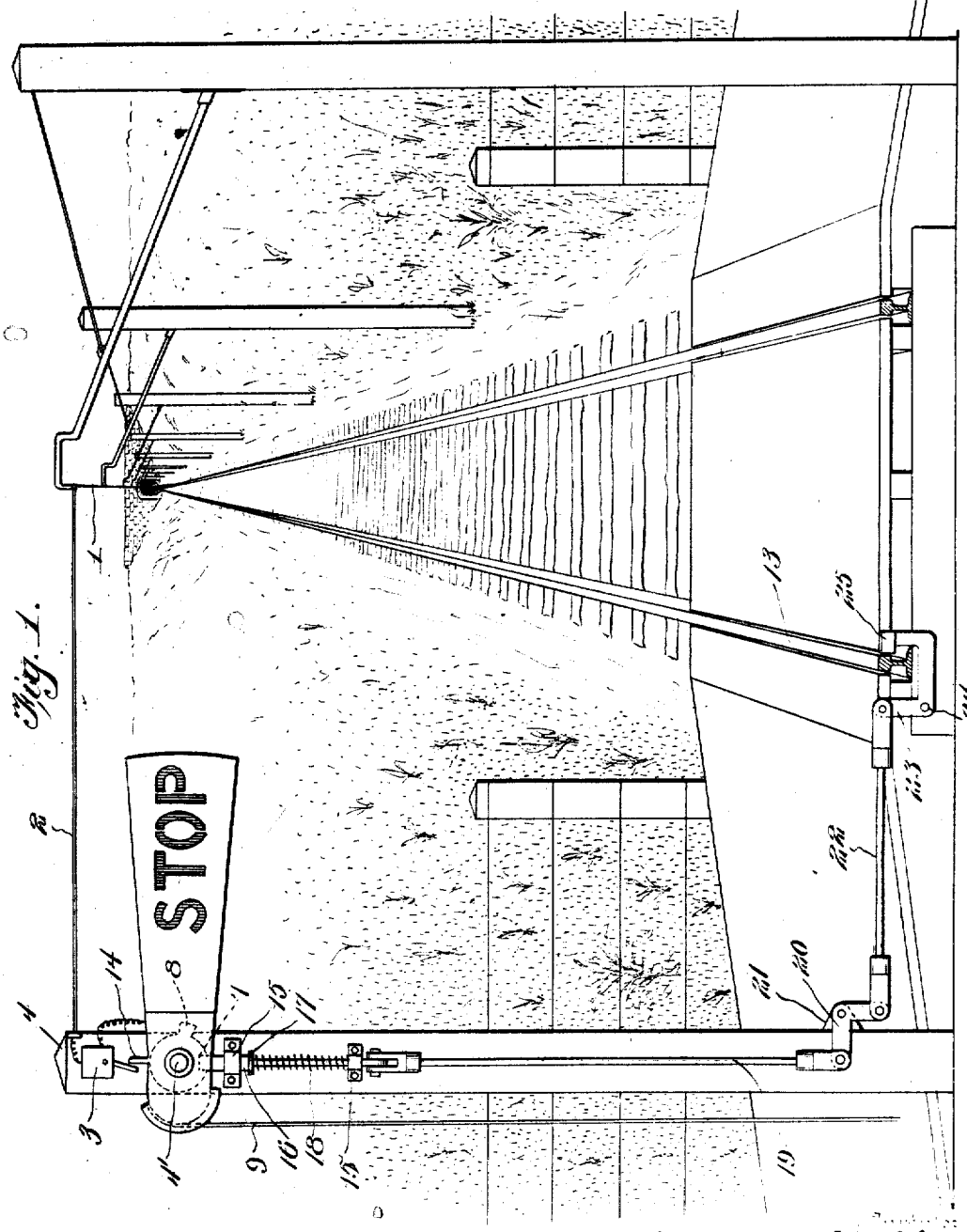


Fig. 1.

Witnesses.

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2 SHEETS—SHEET 2.

Fig. 2.

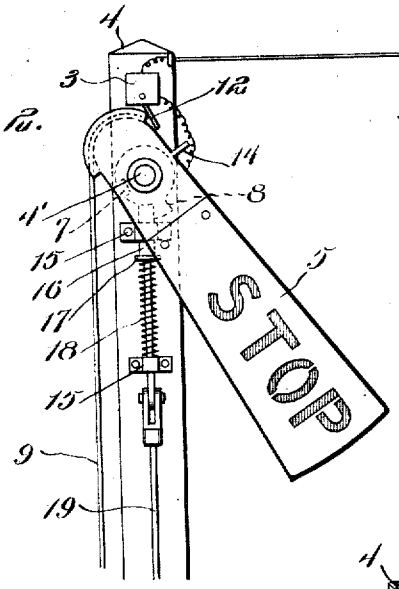


Fig. 3.

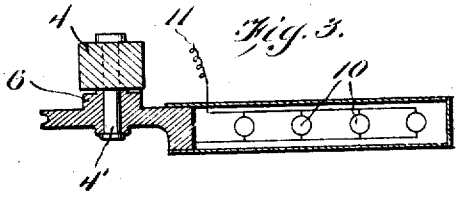


Fig. 4.

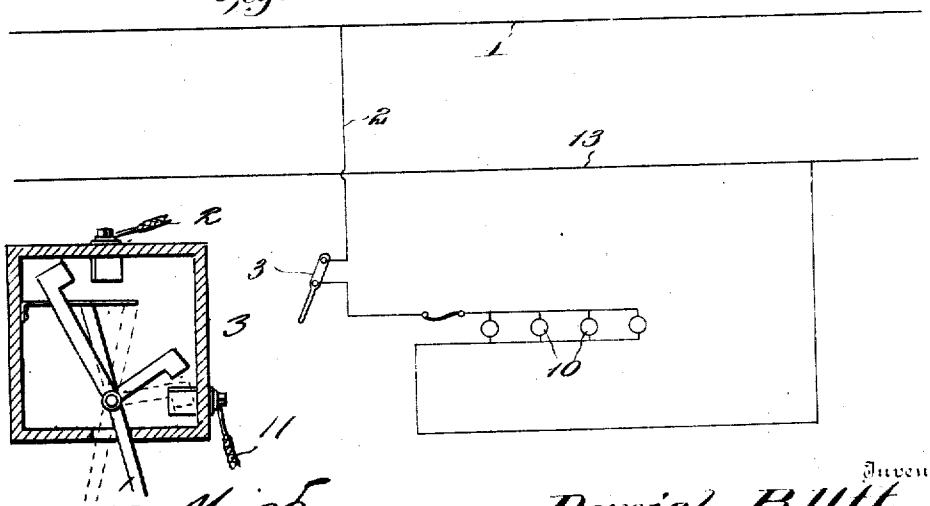


Fig 5

Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL B. UTT, OF NEWCASTLE, INDIANA.

SIGNAL.

No. 924,403. Specification of Letters Patent. Patented June 8, 1909.

Application filed May 12, 1908. Serial No. 432,432.

To all whom it may concern:

Be it known that I, DANIEL B. UTT, a citizen of the United States, residing at Newcastle, in the county of Henry and State of Indiana, have invented new and useful Improvements in Signals, of which the following is a specification.

This invention relates to signals for crossings or stations upon interurban electric trolley lines, and the object of the invention is to provide a device of this character provided with a semaphore arm adapted to be swung from an inclined to a substantially horizontal position by a person wishing to halt a train, and the arm being provided with a transparent signal adapted to be illuminated when swung into a position to halt the train so that the same will be clearly visible to the motorman operating the train.

Another object of the invention is to provide a device of this character having an illuminated signal adapted to be swung to a position to halt a train, said signal being automatically returned to its normal lowered position by the action of the train passing the crossing or station.

With these objects in view the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a trolley line provided with the improved signaling device, illustrating the semaphore arm in position to halt a train. Fig. 2 is a detail illustrating the semaphore arm in its normal lowered position. Fig. 3 is a longitudinal sectional view through a semaphore arm and the post to which it is pivotally connected. Fig. 4 is a diagrammatic view of the electric wiring. Fig. 5 is an enlarged sectional view of the switch box 3.

In the accompanying drawings the numeral 1 designates the trolley wire of an ordinary interurban overhead electric railway system. The wire 1 is provided with a branch wire 2 communicating with a switch box 3 secured upon a post 4. The posts 4 are adapted to be positioned at the crossings or stations of the railway. Secured upon the post 4 by a pivot 4' is a semaphore arm 5. This arm 5 is provided with a boss or inturned portion 6, and this boss is provided with a recess or cut away portion 7 and a projecting lug 8. The boss 6 is preferably positioned centrally on the pivot 4', and the end of the semaphore arm is provided with an annular curved portion having a suitable groove adapted for the reception of a flexible member 9, by which the semaphore may be rotated upon its pivot. The body of the semaphore arm is hollow and is provided with a plurality of incandescent lamps. These lamps 10 are arranged in multiple and have one of their connecting wires 11 secured upon a switch lever 12, while the opposite return wire 11' is connected with one of the rails 13 of the system. The sides of the body of the semaphore 5 are provided with suitable openings, preferably in the shape of letters spelling the word "stop", so as to render the same transparent and the lamps 10 visible when lighted.

The semaphore 5 is provided with a projection 14, which is adapted to contact the switch lever 12 when the arm is thrown to a horizontal position. The switch lever 12 may be provided with a suitable spring or other device for normally throwing the same out of connection with wire 2, or the semaphore 5 may be positioned so as to contact the switch lever when in its lowered position to throw the lever out of contact as illustrated in Fig. 2 of the drawings.

The post 4 is provided with suitable collars 15, spaced a sufficient distance apart and adapted for the reception of a sliding dog 16. This dog 16 is provided with a suitable collar 17, and between this collar and the lower member 15 is interposed a pressure spring 18, which normally forces the dog upward against the boss 6 and into engagement with the cut away portion 7 thereof, when the semaphore is brought into operative position, as illustrated in Fig. 1 of the drawings, or into engagement with the projection 8, when the semaphore is in its lowered position, as illustrated in Fig. 2 of the drawings.

Connected with the lower arm of the dog 16 is a rod 19. This rod 19 has its lower end secured to an L-shaped lever 20, which is pivotally connected to a suitable bracket 21 provided upon the post 4. The opposite arm of this L-shaped lever 20 is pivotally connected with an arm 22, which in turn is pivotally connected with a U-shaped arm 23. The U-shaped arm 23 is adapted to be positioned directly beneath one of the rails 13, and is pivotally connected with one of the ties of the rail as at 24. The inner vertical member of the U-shaped arm 23 is provided with a suitable head 25, and this head

25 is adapted to lie within the path of the flange of the car wheels so as to depress the lever and cause the dog 16 to be withdrawn from the opening 7 and to allow the semaphore arm 5 to drop by gravity after the train has passed the U-shaped arm 23.

It will be noted that when the semaphore arm 8 is raised, as illustrated in Fig. 1 of the drawings, the current from the wire 1 passing through the branch wire 2 and from thence through the knife switch carried by the switch box 3 through the lamps 10 carried by the arm 5 is returned or grounded through the medium of the metallic members connected with the rod 19 and the head 25 contacting the rail 13.

From the above description it will be noted that I have provided a comparatively simple, cheap and effective device for halting cars upon interurban crossings or stations, one which may be quickly thrown into operative position to halt the car, and which is provided with means whereby the semaphore arm is automatically lowered to its inoperative position by the movement of the car. It will be further noted that the device may be illuminated by a simple connecting wire attached to the feed wire of the trolley line, and that the illumination is extinguished when the semaphore arm is dropped.

Having thus fully described the invention what is claimed as new is:

1. A halting device for electric railways comprising a post, contact points upon the post, a pivoted switch for the contact points, a connection between one of the points and the feed wire of the railway system, a pivoted semaphore arm upon the post, incandescent lamps upon the semaphore arm, a connection between the lamps and the second contact point, a return wire for the lamps, a finger upon the semaphore arm, a flexible connection for swinging the semaphore arm and for causing the finger to contact with the switch to energize the connections and light the lamps.

2. A halting device for electric railways comprising a post provided with contact points, a pivoted switch for the contact points, a connection between one of the posts and the feed wire of the railway system, a semaphore arm pivoted upon the post, a hub upon the arm provided with a depression and a projecting finger, incandescent lamps for the semaphore arm, a connection between the lamps and the second contact point, a return connection for the lamps, a projection upon the semaphore arm adapted to contact the switch to close the circuit when the arm is swung to a horizontal position, a flexible member for swinging the arm, a spring pressed dog upon the post adapted to engage the depression of the hub when the arm is raised and the finger of the hub when the arm is lowered, means for swinging the switch out of contact when the arm is lowered, an L-shaped lever pivoted to the post and connected with the dog, an arm for the lever, a U-shaped lever pivoted beneath one of the rails of the system, and a head upon one of the arms of the U-shaped lever adapted to be contacted by the wheels of a car, and adapted to retract the dog to allow the semaphore to drop from a horizontal or active position to an inclined or inactive position.

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

DANIEL B. UTT.

Witnesses:

MATHEW J. CLEARY,

ZELLA E. MERELAND.