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D. J. MULCAHY ET AL

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SIGNALING TRAIN ORDER DISCHARGING DEVICE

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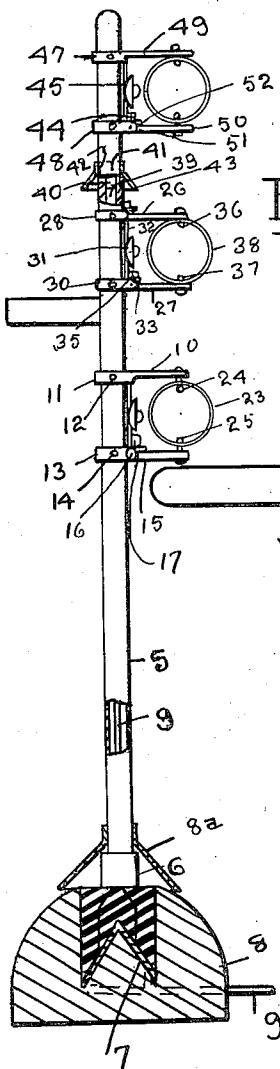


Fig. 1

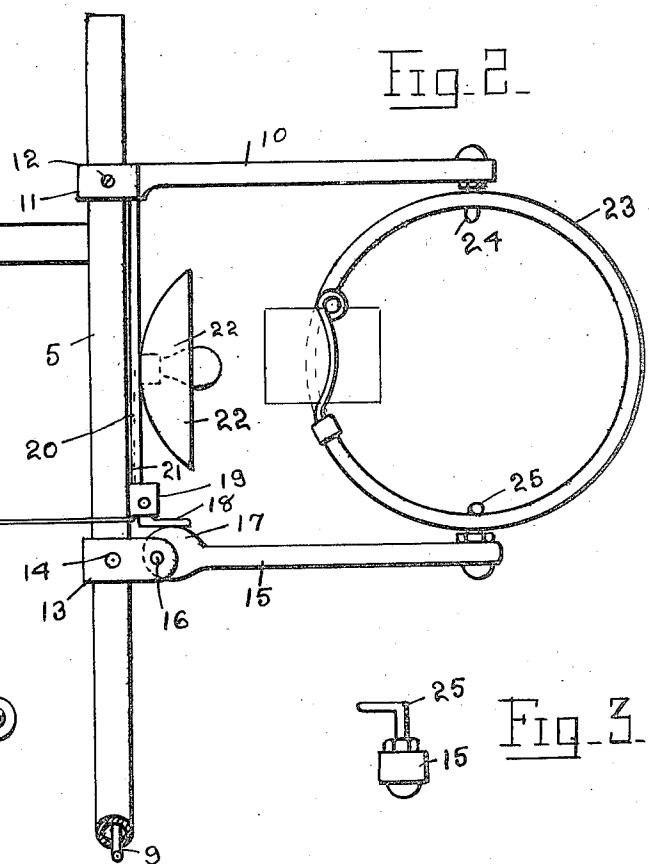


Fig. 2

Fig. 3

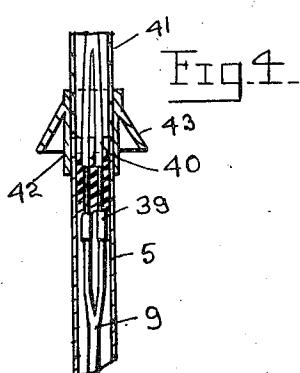


Fig. 4

*Lawford L. Conroy  
David J. Mulcahy*

INVENTORS

## UNITED STATES PATENT OFFICE

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SIGNALING TRAIN ORDER DISCHARGING  
DEVICEDavid J. Mulcahy, Wellington, and Crawford C.  
Perry, Huron, Ohio

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3 Claims. (Cl. 258—2)

This invention relates to improvements in train order supporting devices, and its leading object is to provide a standard with a pair of order ring supporting arms, one of which is mounted rigidly 5 on the standard, and the other of which is pivoted to the standard and supported in horizontal position by the straddling of the order ring upon the outer ends of both arms, whereby the withdrawal of the order ring will cause the hinged arm to 10 drop by gravity, thereby operating an electrical circuit, to signal the station agent that the departing train has picked up its order ring.

Another object of the invention is to provide a swivel L-shaped hook on the outer end of each arm, so arranged that the opposed hooks will be engaged by the order ring, and the latter may 15 be disposed in proper train direction, regardless of the angle of projection of the arms.

With the above and other objects in view, the 20 invention relates to certain new and useful combinations, constructions, and arrangements of parts, clearly described in the following specification, and fully illustrated in the accompanying drawing, in which:—

Fig. 1 is a side view of a standard equipped 25 with a pair of order ring supporting devices.

Fig. 2 is a side view, on an enlarged scale of one of the devices.

Fig. 3 is a detail view of one of the L-shaped 30 swivel hooks.

Fig. 4 is a detail longitudinal sectional view through the interfitting ends of an extension standard and the main one.

Referring to the accompanying drawing illustrating our invention, 5 designates a standard, which is shown to be tubular, but which may be of any suitable construction. The lower end of this standard is equipped with an electrical connector 6, which is adapted to engage the electrical connector 7, carried by the base 8. From 35 the electrical connector 6 the current carrying wires 9 extend upwardly through the standard.

The upper end of the standard is equipped with a rigid arm 10, which may be provided with a 40 collar 11, adapted to encircle the standard 5, and this may be secured in fixed relation to the standard by means of the set screw 12. Below this rigidly secured arm a collar 13 is arranged, and this may be secured in fixed relation to the standard and the upper collar 11 by means of the set screw 14. To this collar another arm 15 is hinged 45 at 16, and the inner end of this arm 15 may be formed or provided with a cam 17, which is adapted to engage and raise the switch member 18, which extends from the electrical

switch 19, carried by the vertical spacing bar 20, which is connected at its upper end to the collar 11 and at its lower end to the collar 13. From the switch 19 the current wires 21 lead to the combined electrical lamp socket and reflector 22, which is supported on the spacing bar or rod 20, so as to project light rays upon the order ring 23. 5

The outer end of the rigid ring holding arm 10 is equipped with an L-shaped hook 24, swivelled thereto, and the outer end of the lower hinged arm 15 is equipped with a similar L-shaped hook 25 swivelled thereto. The order ring 23 is of conventional construction and is supported in place by positioning the same over the upper L-shaped hook 24, then raising the lower hinged arm 15 to horizontal position and positioning the order ring under the lower L-shaped hook 25. In this way the weight of the lower hinged arm tends to maintain a downward pull on the order ring against the L-shaped swivel hook of the rigidly secured upper arm, and the order ring is thus held in selected position, against accidental displacement from the two supporting arms. Due to the swivel mounting of the supporting hooks or members on the outer ends of the arms, the order ring may be 10 presented to the moving train at any preferred angle. This adjustment is further aided by means of the collar mounting of the two arms on the standard, and the set screws thereof, which permit of the locking of the arms in any preferred angular relation to the standard. 15

Above the arms 10 and 15 two additional arms, 26 and 27, of similar construction, are arranged. The arm 26 is rigidly secured by its collar 28 to the standard 5, and the arm 27 is hinged at 29 to the collar 30, which is mounted on the standard 5. A combined reflector and lamp 31 is arranged on the vertical connecting and spacing bar 32, which unites the collars 28 and 30 to each other. The lower arm 27 is provided with a cam or similar operating element 33 for operating the switch arm 34 of the electrical switch 35. 20

The outer end of the rigid upper arm 26 is equipped with an L-shaped swivelled hook 36, 25 and the outer end of the hinged arm 27 is similarly equipped with the L-shaped hook 37. A second order ring 38 is supported on the swivelled hooks 36 and 37, in the manner previously described.

The upper end of the standard 5 is equipped with an electrical connector 39, and is adapted to receive the electrical connector 40 of the extension standard or post 41. The lower end of this post or extension standard is equipped with 30 55

5 a collar 42, designed to straddle the joint between the main standard 5 and the extension or post 41, and is provided with a conical skirt or rain guard 43, to protect the joint against rain leakage, and consequent short circuiting of the wires enclosed by the standard 5. From the connector 40 electrical wires lead to the switch 44, which controls the circuit through the lamp 45, arranged on the spacing bar 46, which connects the upper 10 collar 47 with the lower collar 48. An arm 49 is connected rigidly with the upper collar 47, and an arm 50 is hingedly connected to the lower collar 48, and is equipped with a cam 51 or similar element for operating the movable member 15 52 of the switch 44.

20 The lower pair of supporting arms may be used for delivering an order ring to the locomotive of a train, and the next upper set of arms may be used for delivering an order ring to the caboose of a train. The extension post or standard and its pair of supporting arms are employed when a train is made up in two sections, or one train follows right after another.

25 When any one order ring is withdrawn, by the action of a projecting pick-up arm, carried by the train, the lower supporting hinged arm will be released, to drop by gravity against the standard. When this takes place the circuit through the lamp, which illuminates the two supporting arms 30 will be broken, and at the same time the circuit through the station signal 53 will be broken, thereby indicating to the station agent that the associated order ring, and its train order, has been picked up. Each of the switches of the other order 35 ring supporting arms is connected in circuit with a similar signal in the station house, which operates in a similar manner.

40 Due to the mounting of the arms on the standard, the rings may be presented at any angle to an approaching train, and due to the swivelled supporting hooks, the order rings will have a relative motion when engaged by the pick up arms of the train. As soon as an order ring has been withdrawn the lower supporting arm thereof will 45 drop by gravity, and this will serve to indicate to trainmen and yardmen that the associated previously mounted order ring has been withdrawn, leaving the two arms free of any order for delivery.

50 The standard may be L-shaped or T-shaped, to provide support for any other device or object, as an additional horizontal arm 54.

55 The standard may be provided with any type of suitable portable base, so that it can be shifted from place to place, or arranged so that it can be inserted in a socket formed in a yard block or casting.

60 Various changes in the details of construction, arrangement and relation of the parts, may be made, without departing from the spirit of the invention, and accordingly it is understood that various changes in the details of construction, and their arrangement, may be made.

5 The signaling device and order ring support operate so that when the order ring is picked up by the engineer, the conductor will be able to promptly ascertain this fact, by observing whether the light, controlled by the pivoted lower arm, is out. This will serve to signal him that the order ring has been picked up by the engineer. If the light is still active the conductor will know that the engineer has not picked up the order ring, and another train employee may pick it up, by 10 the use of an emergency take-off device or relieving arm.

15 When the arm drops the circuit through the station signal or lamp is also broken, and the station agent at once knows that the order ring and its train order have been properly delivered to the engineer.

20 In districts where electricity is not readily available, or during conditions when electrical service is not working, a lantern or other portable illuminating device may be employed.

25 The device may be constructed for permanent installation in the ground, or with a portable base, which may be equipped with a storage battery, dry batteries, or other means, similar to gas generating units, for providing a contained source of illumination. It may be constructed with a single pair of ring supporting arms, or when desired with a duplex pair of such arms, and with the extension standard or post, as illustrated in 30 Fig. 1. To protect the base electrical connections, a drain cone 3a may be attached to the lower part of the standard or post 5, above the base 8, so as to deflect rain water outwardly of the joint between the standard and the base. 35

Having described our invention, we claim:—

1. A train order discharging device, consisting of an upright support, a rigid horizontal arm mounted thereon, another arm pivoted to the support below the first-named arm and provided 40 on its inner end with a switch operating cam, a switch disposed adjacent to said cam, and a signal controlled by the switch.

2. The combination set forth in claim 1, each arm having a swivelled L-shaped hook on its outer end. 45

3. A train order delivering device consisting of a tubular standard, an order ring supporting arm mounted rigidly thereon, a second order ring supporting arm hinged to the standard in fixed relation to the first arm and adapted to drop by gravity against the standard, a retaining element on the end of each arm with which an order ring may engage to support the lower hinged arm in extended horizontal position, an electrical lamp 55 for illuminating the order ring supported on the arms, a cam on the end of the hinged arm, a switch operated by the cam controlling the circuit through the lamp, and a station signal in circuit with the lamp and switch. 50

60 CRAWFORD C. PERRY.  
DAVID J. MULCAHY.