(No Model.) 2 Sheets—Sheet 1.

A. M. MOZIER.

METHOD OF INDICATING AND DELIVERING SPECIAL ORDERS TO MOVING TRAINS.

No. 589,975. Patented Sept. 14, 1897.

Fig. 1.

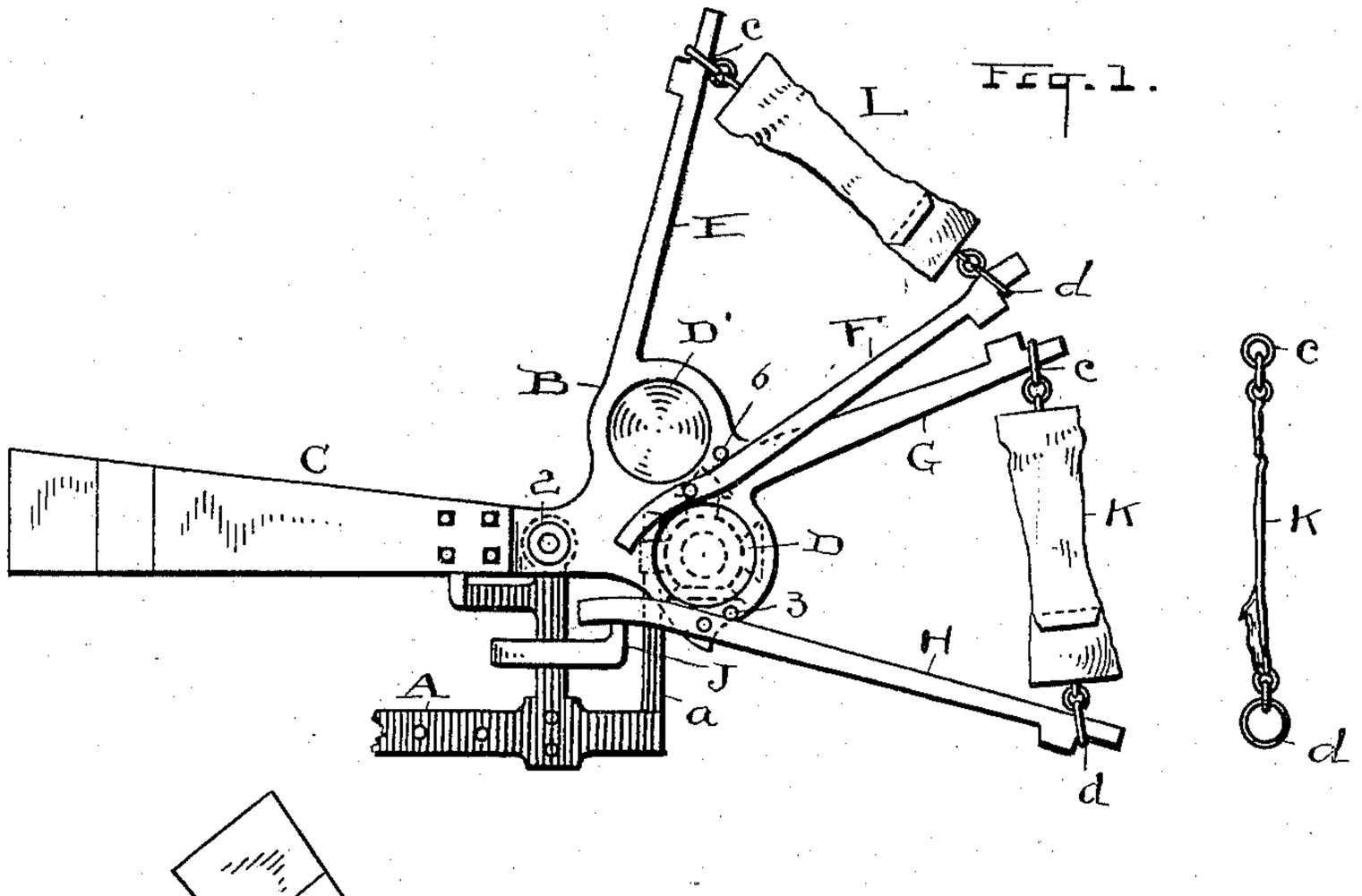
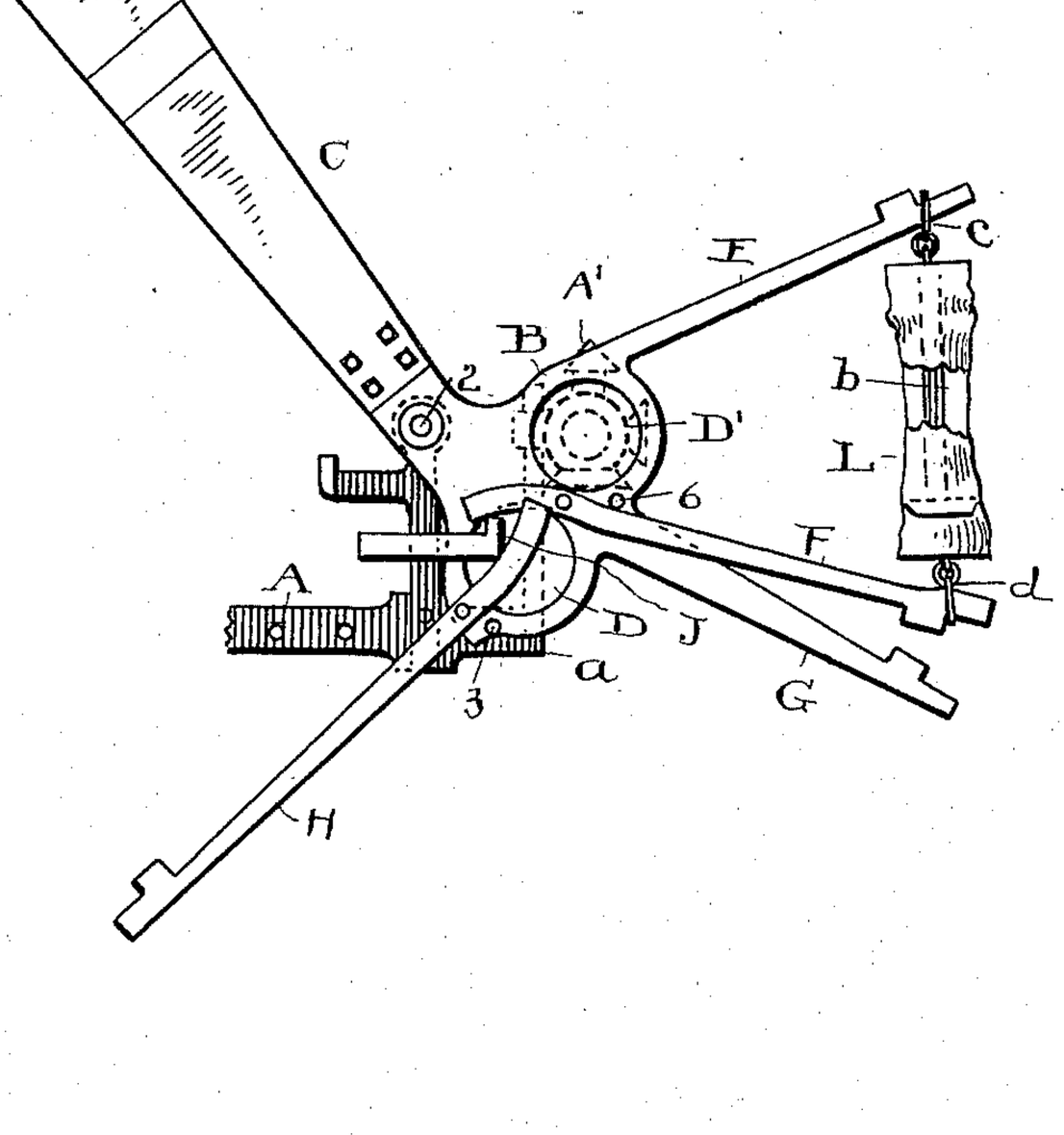


Fig. 2.



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By H. T. Fisher Atty

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

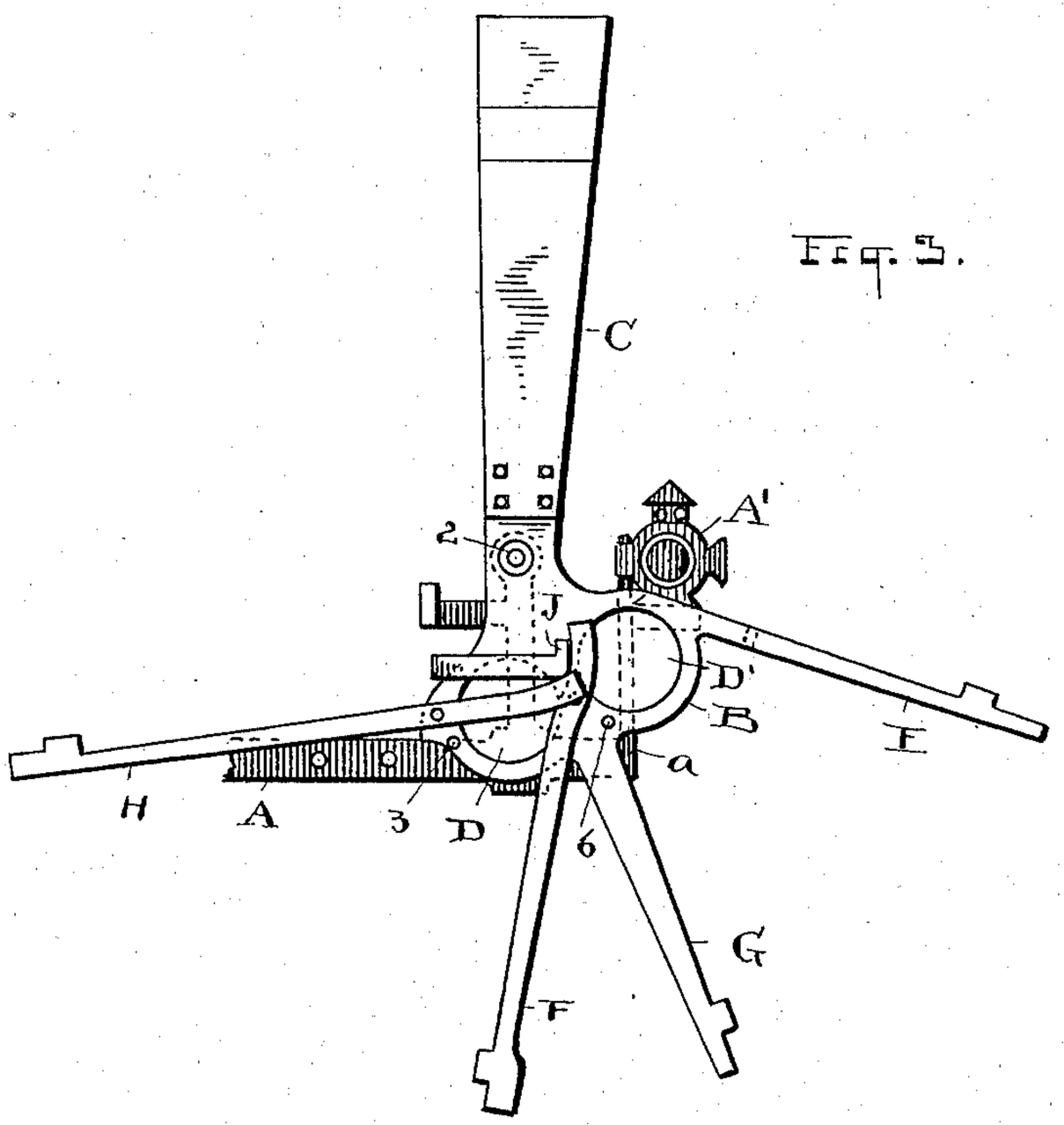
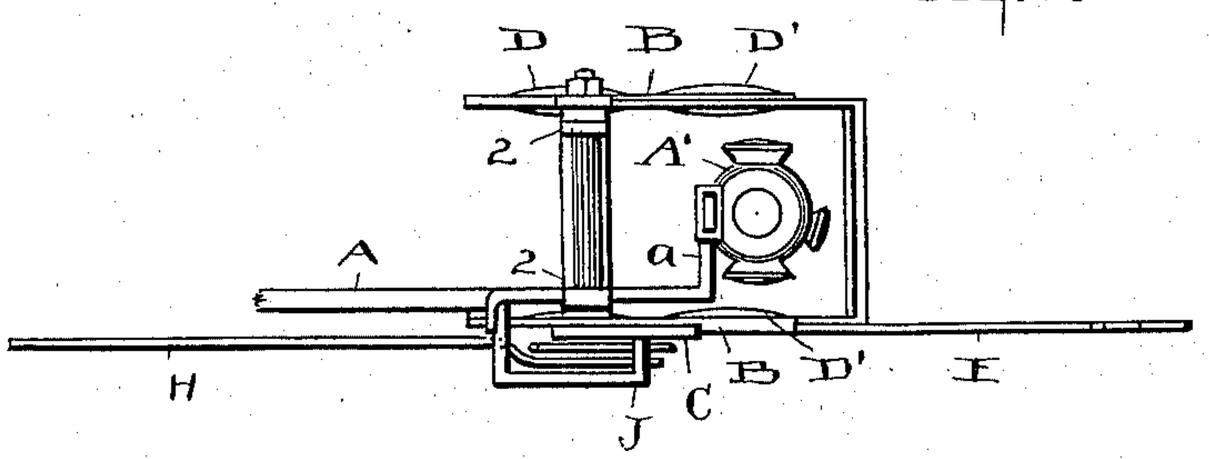


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALBERT M. MOZIER, OF CLEVELAND, OHIO.

METHOD OF INDICATING AND DELIVERING SPECIAL ORDERS TO MOVING TRAINS.

SPECIFICATION forming part of Letters Patent No. 589,975, dated September 14, 1897.

Application filed October 26, 1896. Serial No. 610,032. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. MOZIER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Methods of Indicating and Delivering Special Orders to Moving Trains; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway order and signal devices; and the invention consists in means for indicating and delivering orders and other communications to the engineers and conductors of rapidly-moving trains, thereby avoiding loss of time and wear and tear on the rolling-stock, substantially as shown and described, and particularly pointed out in the claims.

In railway terms a "nineteen order" is an order which does not require the signature of the engineer and conductor and is delivered to trains without entirely stopping them—that is, when the train approaches a station the speed is slackened to such an extent that the conductor can alight and have time to receive the orders and then jump on again toward the rear of the train. It often occurs that such trains are obliged to stop entirely, but with my device the "nineteen orders" can be delivered while the train is running even at full speed and no delay at all occurs. This method of delivering orders is preferably used in connection with the well-known "block system," but I do not wish to be understood as limiting my device to that particular system.

This device is located at the side of the track, and has arms which carry a stout cloth pouch or other receptacle between them and within easy reaching distance of the engineer and conductor on the train as the train passes by. In connection with this device I have incorporated a semaphore or signal which notifies the engineer of an approaching train as to whether any orders may be awaiting him. If there are, he extends his hand, and as the train passes by under full speed takes the pouch or receptacle which carries the orders. The first pouch or receptacle being removed by the engineer the device instantly and automatically changes to a second position where the conductor can see by the changed position of the semaphore that his orders are in position to be taken. At day the location of the semaphore-arm indicates the various positions, and at night the usual red, green, and white lights accomplish the same result.

In the accompanying drawings, Figure 1 illustrates a side elevation of my improved device in the first position with the engineer's pouch or receptacle in place to be withdrawn. Fig. 2 shows the engineer's pouch or receptacle removed and the device changed to the second position with the conductor's pouch or receptacle in place to be withdrawn. Fig. 3 shows the third and normal position and with both pouches or receptacles removed. Fig. 4 is a plan view of Fig. 3 and shows the relative position of the lantern between the lenses on the signal.

A represents the main frame, which is located at the side of the railroad-track and which is adjustably supported on any suitable post or other support. A tilting member B is pivoted at 2 on the frame A, and when not in position to deliver orders the normal position is as shown in Fig. 3. The main frame A has a lamp-bracket *a*, which supports the lamp A′ between the red and green lenses D D on each side of the tilting member B. The semaphore-arm C serves to indicate the various positions of the tilting member at day, and the red, green, and white lights indicate the various positions at night.

The pouches or receptacles L and K are each supported upon two arms, one of said arms being rigidly fixed to the member B and the other being pivoted upon it. The engineer's pouch or receptacle K is supported between the ends of the rigidly-fixed arm G and the lower pivoted arm H, and the conductor's pouch or receptacle L is supported between the rigidly-fixed arm E and the pivoted arm F.

Each pouch or receptacle is preferably made of stout canvas, cloth, or other suitable material and has a pocket at its lower end, into which the orders, inclosed in waterproof envelops, are deposited. A hoop of wire or other material with the orders attached to it may be used in place of such pouch. The

pouch or other receptacle is also preferably made to have some elasticity, and in this instance I show a rubber strap *b* sewed or otherwise fastened lengthwise of the pouch or receptacle. This elasticity could be dispensed with, but it is more convenient and desirable for the purposes, as hereinafter set forth.

Each pouch or receptacle has a small and a large ring *c* and *d*, respectively, fastened at each end. The small rings *c* engage the ends of the rigidly-fixed arms, and the large rings *d* engage the enlarged ends of the pivoted arms, the object being to have the large rings at the lower end, where the pockets are located, so that when the pouches or receptacles are affixed between the arms it will be impossible to slip the small rings *c* over the enlarged ends of the pivoted arms, thus preventing the possibility of reversing the ends of the pouch or receptacle and thereby allowing the orders in the pockets to fall out.

Now, when the pouches or other receptacles are in position, the tension of the rubber or the elasticity within the pouches or receptacles serves to draw the pivoted arms F and H against stops 6 and 3, and this serves to keep these pivoted arms rigid with member B. In Fig. 1 I show the short end of arm H resting on a bracket J of the main frame A, and as long as pouch or receptacle K is suspended between arms G and H this will serve to hold the tilting member up in the position as shown in Fig. 1; but as soon as the engineer grasps and removes the pouch or receptacle K the weight of member B forces the short end of arm H up and out of the way, and the whole drops into the position as seen in Fig. 2. Now the short end of arm F holds the tilting member B in the position as shown until the conductor grasps and removes pouch or receptacle L, and then the weight of member B again forces the short end of arm F up and out of the way and allows the whole to drop into a vertical position, as seen in Fig. 3.

The relation of the semaphore and lights to the position of the pouches or receptacles is as follows: When the train approaches, the engineer and conductor are on the lookout, and if the semaphore or red light is seen, as in Fig. 1, they are thus warned that orders are awaiting them. This first position is for the benefit of the engineer and he knows that his pouch or receptacle is in position to be taken. As the train passes he extends his hand and grasps and removes his orders. This allows the conductor's pouch or receptacle to be instantly and automatically brought into the same position as lately vacated by the engineer's pouch, and the conductor by the changed position of the semaphore-arm C by day or by the green light D′ at night is made aware of the fact that the engineer has received his order and that his own pouch or receptacle is in position to be taken. He stands on the step of a car, preferably one of the rear ones, and reaches out and grasps and removes his pouch or receptacle. This again disturbs the equilibrium of the tilting member, and it assumes the vertical position, as seen in Fig. 3, and shows a white light, indicating to all concerned that the orders have been taken.

In Fig. 4 I show the lamp with a lens at each side and a smaller lens in front. The lens in front is for the purpose of throwing a light upon the pouches or receptacles as they come into position, so that the engineer and conductor can at night or in foggy weather clearly see to grasp them.

A catching device could be attached to the train to grasp the orders; but I have found in practice that a train running at a speed of sixty miles an hour offers no inconvenience to the person grasping the pouch or receptacle.

The arms E, F, G, and H are preferably made of spring metal, so that no perceptible resistance is offered when the pouches or receptacles are removed.

This invention is also intended to be utilized for the delivery of staffs under a staff system of blocking trains, and for the delivery of messages or any kind of communications to moving trains.

The construction as described could be modified in numerous ways, and I do not wish to limit myself to this particular construction, and I therefore reserve the right to modify and change the construction within the scope of the invention.

I desire it to be understood that the use of the word "receptacle" in the claims is designed to cover any sort of a holder which will receive or hold orders, communications, messages, or other means of conveying information or instructions to a person on a passing train, and hence also a like latitude should be given to the word "orders" or "communications" as used in the description and claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. A device constructed to separately hold communications for the conductor and engineer of a passing train, in combination with a signal constructed to automatically change its position and give different indications when either and both of said communications are removed from said device, substantially as described.

2. A device substantially of the kind described, having a series of two or more holders for train communications, and a temporary support for said holders constructed to bring each holder successively into receiving position, substantially as described.

3. A device for delivering separate communications to the conductor and engineer of a passing train, a combined semaphore and delivering mechanism, said mechanism constructed to automatically change the position of said semaphore when said communications are removed, giving separate indica-

tions of the semaphore-blade and lamp-signal when either of the communications are removed, substantially as described.

4. In the device described, a plurality of holders to receive train communications, and a supporting member therefor constructed to bring each individual holder into a certain position when one of said holders is removed, and means to indicate the changed position of said holder, substantially as described.

5. A device for delivering separate orders or communications to the conductor and engineer of a passing train, comprising a support located at the side of the track and means thereon to temporarily hold said communications, said means constructed to change positions when either one of the orders or communications are removed, and signals automatically operated connected with said means, substantially as described.

6. A device for delivering separately to the conductor and engineer of a moving train orders or other communications, the mechanism being such that the orders or communications for the conductor will be automatically brought into position for delivery when orders or communications have been taken by the engineer of a moving train, a suitable support and duplicate tilting members on said support, each of these duplicate tilting members having one fixed and one pivotal carrying-arm for pouches or other receptacles, substantially as described.

7. A receptacle for delivering orders to moving trains constructed to be suspended between two arms, said receptacle being elastic and having a pocket for said orders, and means to prevent the pouch or receptacle from being suspended in a reversed position, substantially as described.

8. In a device for delivering communications to moving trains, a support located at the side of the track and a tilting member on said support having a plurality of arms, pouches or other receptacles to contain communications suspended between said arms, a semaphore-arm and colored lenses connected with said tilting member to indicate a change in position of said arms, and a light for the pouch, substantially as described.

Witness my hand to the foregoing specification this 13th day of October, 1896.

ALBERT M. MOZIER.

Witnesses:
H. T. FISHER,
R. B. MOSER.