No. 655,165. Patented July 31, 1900.

P. P. SHIVES.

MESSAGE DELIVERING DEVICE FOR TRAINS.

(Application filed May 10, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

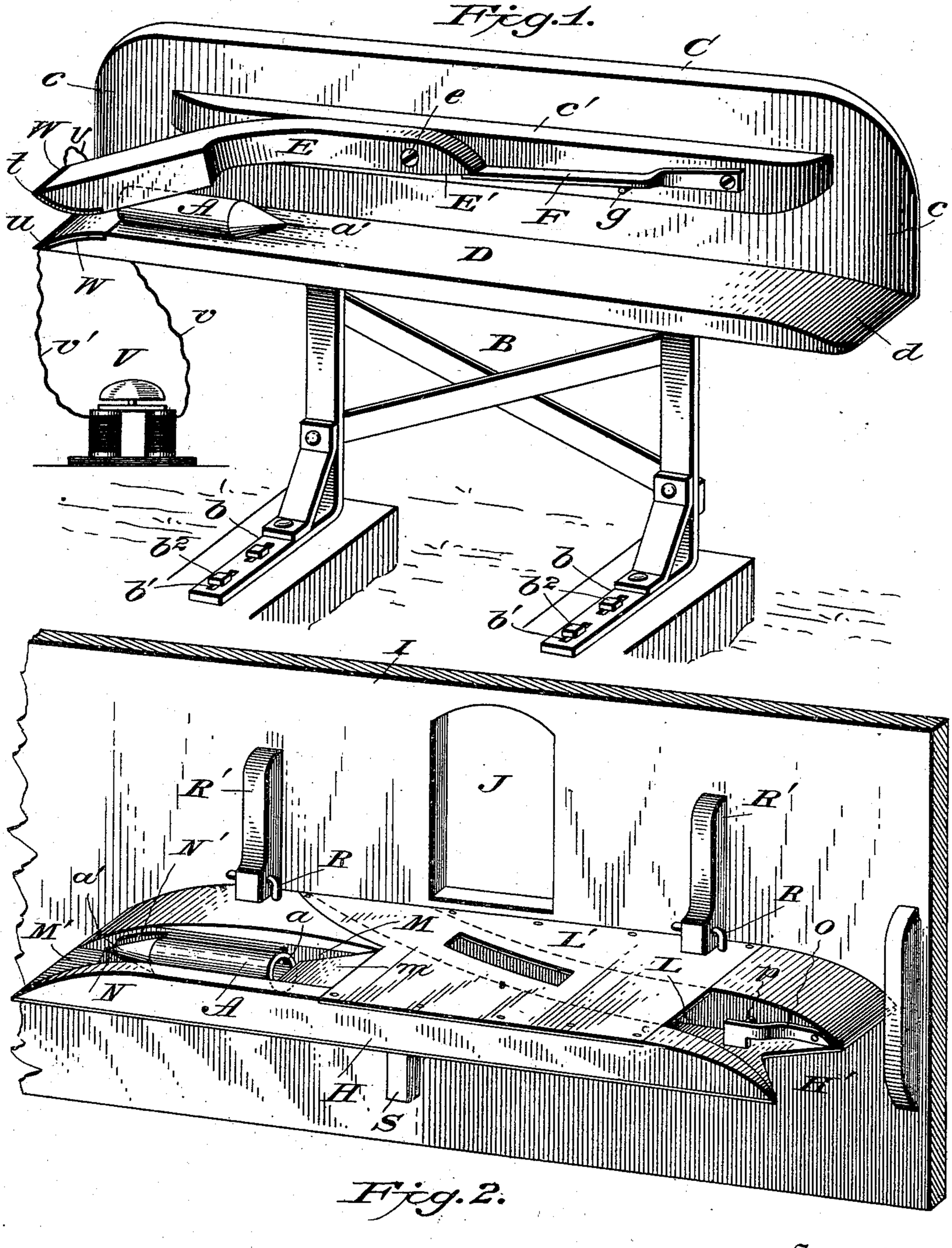

Fig. 2.

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Fig. 3.

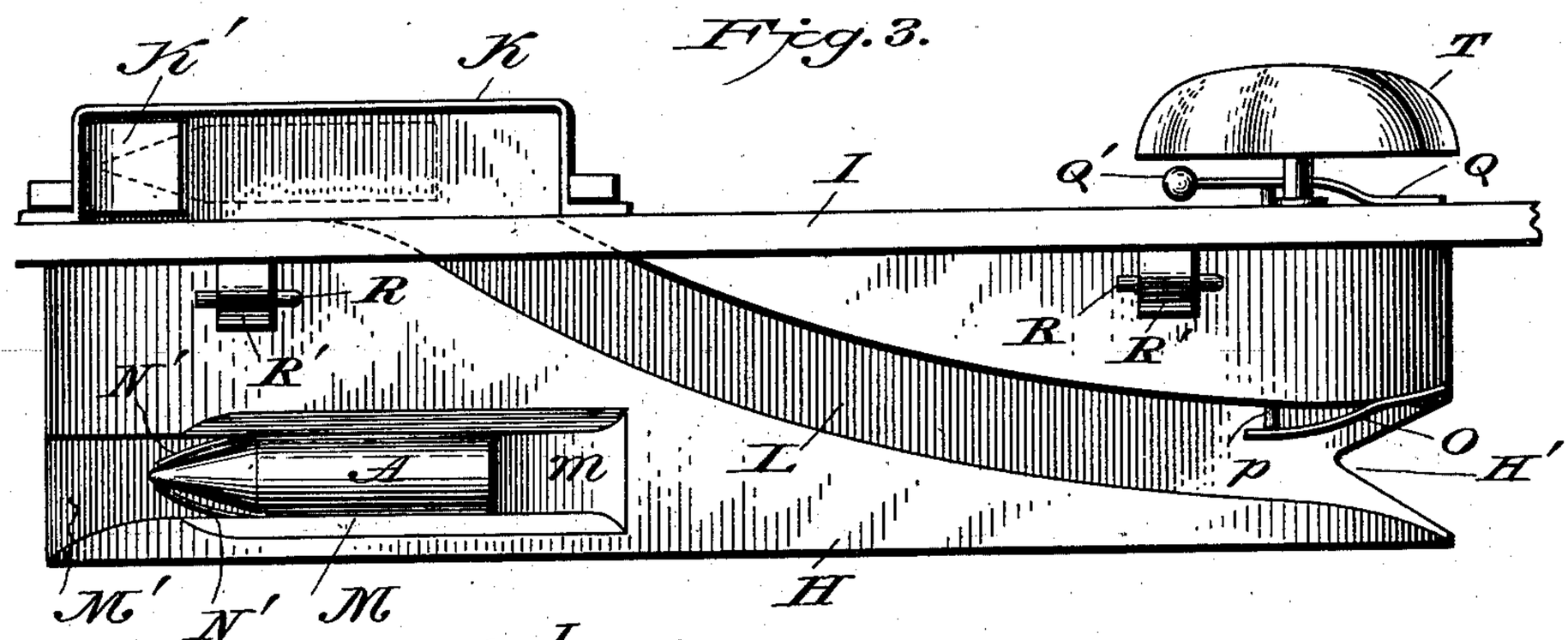


Fig. 4.

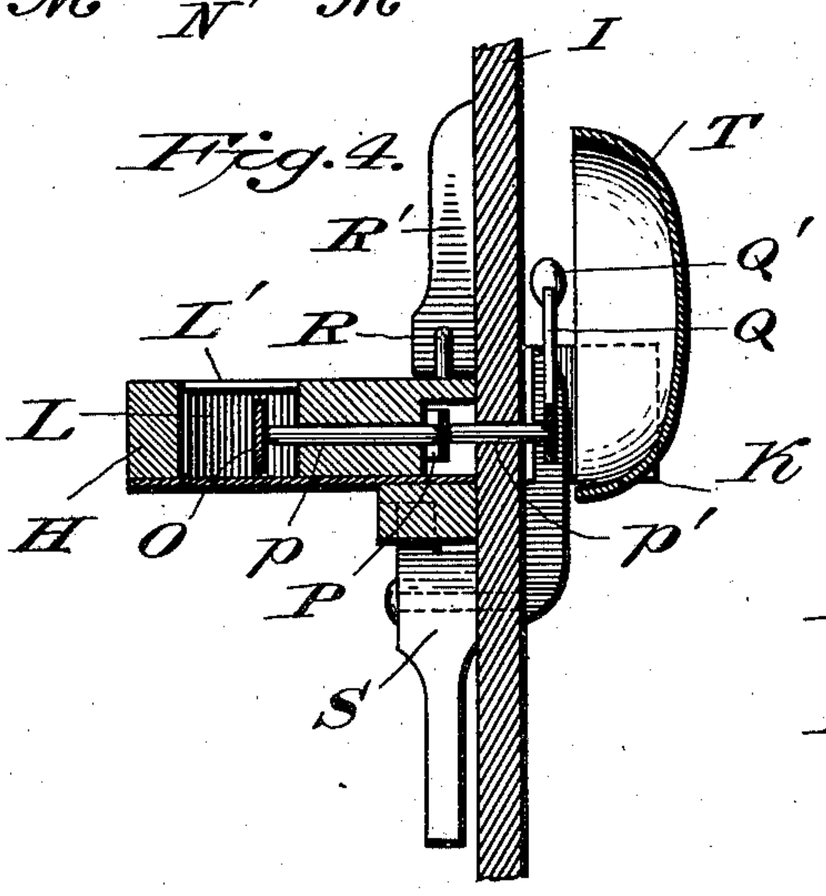


Fig. 5.

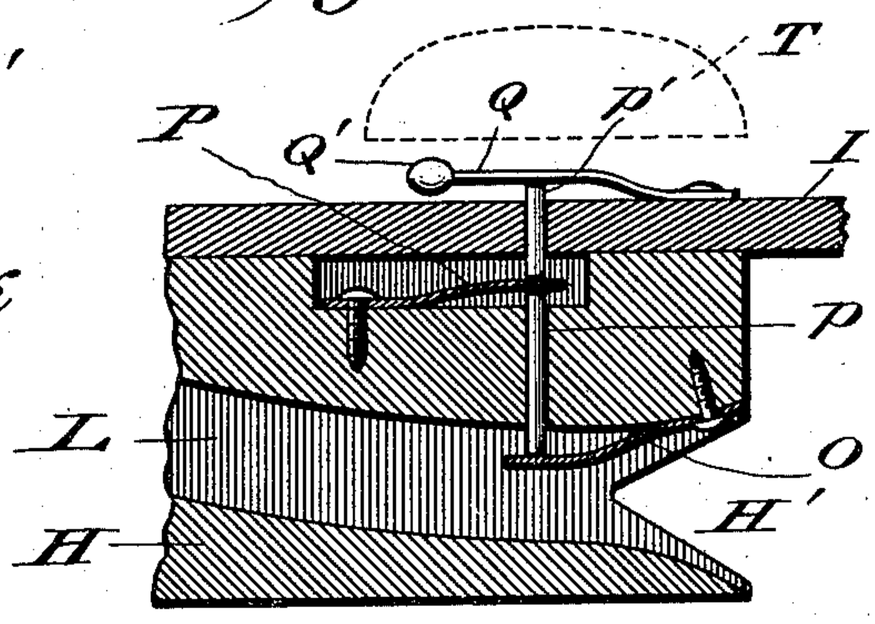
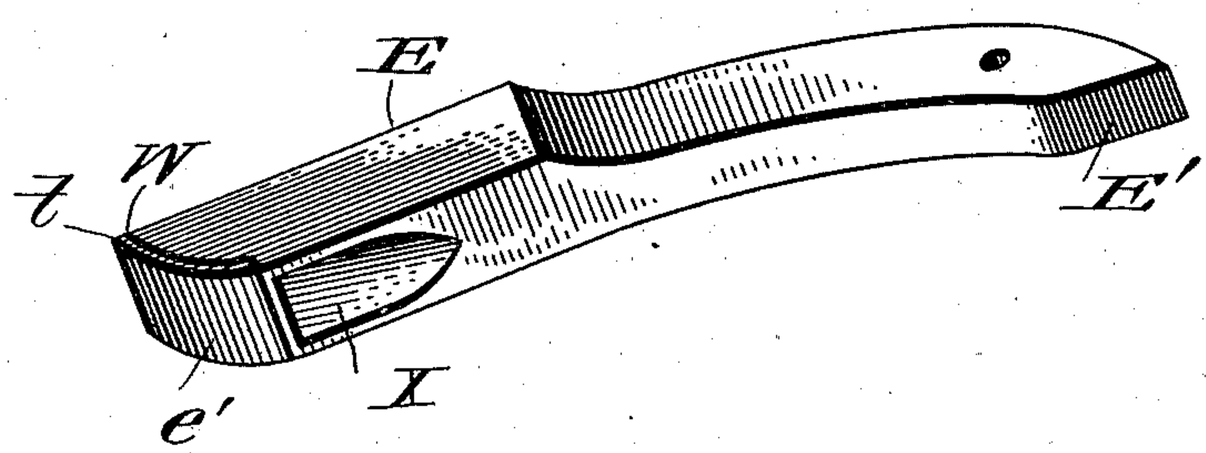


Fig. 6.



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UNITED STATES PATENT OFFICE.

PETER P. SHIVES, OF DICKEY'S MOUNTAIN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOHN V. FISHER, OF BRUNSWICK, MARYLAND.

MESSAGE-DELIVERING DEVICE FOR TRAINS.

SPECIFICATION forming part of Letters Patent No. 655,165, dated July 31, 1900.

Application filed May 10, 1900. Serial No. 16,223. (No model.)

To all whom it may concern:

Be it known that I, PETER P. SHIVES, a citizen of the United States, residing at Dickey's Mountain, in the county of Fulton and State of Pennsylvania, have invented certain new and useful Improvements in Message-Delivering Devices for Trains; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The chief object of this invention is to provide for the automatic delivery of telegraphic and other written messages by the use of yielding grasping devices from a station to a moving train or at will from a moving train to a station.

To this end my said invention consists in the combination of a movable resilient holder and its supports on or near the track with a receiving device carried by the train, the said device being adapted to take a message-holding cylinder from the said holder as the train passes by.

The said invention also consists in the combination, with the said receiving device and holder, of a shelf or platform on the exterior of a car, said shelf being provided with a channel which conducts the cylinder from the receiving device to a receptacle within the car.

The said invention also consists in a yielding holder carried by the train and in an inclined plane leading thereto in combination with the stationary holder along the track in order that a movable jaw or lever of the latter holder may slide down the said incline and strip the message-holding cylinder from within the moving holder as the train goes by, the cylinder remaining thereafter in the said stationary holder until withdrawn by hand.

The said invention also consists in the combination, with the said holder and receiving device, the latter having a movable resilient part, of a sliding pin in contact with the latter and a bell or equivalent alarm operated thereby within the car when a message-holding cylinder passes by the said movable part.

The said invention further consists in an electric alarm-circuit opened or closed by the opening or closing of the holder along the track in order that a continuous alarm may be sounded so long as there is a message within the said holder awaiting delivery to the train or, if preferred, that a signal may be given only when the message is delivered.

The said invention further consists in divers additional details of construction hereinafter more particularly set forth and claimed.

In the accompanying drawings, Figure 1 represents a detail perspective view of the track-holder and its supports. Fig. 2 represents a similar exterior view of a part of a car provided with the shelf-receiving device and holder, the passage being indicated by dotted lines. Fig. 3 represents a plan view of the shelf and the receptacle, the cover of the former being removed. Fig. 4 represents a vertical transverse section through the car-wall, shelf, and bell on the line of the sliding rod or pin. Fig. 5 represents a horizontal section on the same line, and Fig. 6 represents a detail perspective view of lever E.

In the said drawings, A designates the message-holding cylinders, which are preferably of light hollow metal or hard wood, open at end a and tapering to a point at end a'.

B designates a stationary supporting-frame provided with feet b, having slots b', through which bolts b^2 or screws are passed for fastening it to the ties of the railroad-track or other immovable base.

C designates a long vertical wall running parallel to the track and fastened to the upper ends of the vertical bars of the said frame. At its lower edge a narrow horizontal shelf D extends inward toward the track along the whole length of said wall, forming at one end the stationary lower jaw of the holder. Both ends of this shelf are beveled on top at d from the top outward and downward, and the proximate parts c are also beveled from the front outward and backward, these beveled faces serving to allow the receiving device and shelf carried by the car or locomotive, as hereinafter described, to pass over the said stationary shelf without locking or undue friction and to facilitate the transfer of the cylinders. The front of the said wall is provided with a longitudinal strengthening rib or offset c', to which is pivoted by a pin e the lesser end of a clamping jaw or lever E, the other end of which is beveled at e', as shown. A spring F, attached by one end to the said offset, bears up against the heel E' of the said

jaw or lever, forcing the operative end of the same down on the cylinder A. The said spring-pressed jaw E and shelf or fixed jaw D constitute the stationary holder for the message-bearing cylinder. The said jaw is provided with a recess X in its under side to fit on the upper part of the said cylinder, the outer end of the said recess being square to overhang the end of the cylinder, thereby holding it securely against accidental displacement. The beveling in reverse directions of the proximate parts of shelf D and lever or jaw E beyond this recess provides a flaring mouth, which facilitates the introduction of the cylinder by hand, it entering by the conical end. A fixed pin *g* under the middle of the said spring F braces the same and prevents it from being forced down too low.

H designates an exterior shelf carried by a car I, beveled downwardly at both ends like D to allow the easy transfer of the cylinders from one to another. The side wall of the car has an opening J through it and a receptacle K under the said opening within the said car. The forward end of the shelf H is provided with an open-end longitudinal channel H′, constituting it a receiving device for the cylinders. The bottom of the said device is cut away from the end inward with a V-shaped excision to facilitate the entrance of the cylinders. From this channel a curved passage L, covered by a plate L′, leads to the said receptacle within the car. The other end of the said shelf is provided with another longitudinal channel M, flaring at its mouth M′, and having an upward incline *m* at the other end. Within this channel and attached at their inner ends to the opposite walls thereof are two springs N N′, their outer ends together constituting a spring-holder for cylinders which are to be delivered to a station, containing a message for said station or a following train. To the inner side of the receiving device H′ is attached by one end an oblique spring O, the other end of which is in contact with a pin or rod *p*, sliding through the proximate wall of the car against another spring P, attached thereto. This bears by means of an intermediate pin or rod *p′* against a spring-arm Q, which carries the hammer Q′ of the bell T. In consequence whenever a message-cylinder is forced into the receiving device it announces the fact by a stroke of the bell as it passes on through the said passage into the said receptacle. The said shelf H is preferably hung detachably to the outside of the car by bent pins R entering holes *r* in lugs R′ of said car-wall. A turn-button S, overlapping a part of the said shelf from below, locks it in place. The rearward end of the receptacle K is provided with an interior inwardly and upwardly bent plate K′, which serves to prevent the cylinder from springing over the rear wall of said receptacle when it enters the same from the passage with any considerable impetus.

The jaws D E of the stationary cylinder-holder are provided with electrical contact-plates *t u*, which close a circuit through wires *v v′* to a conventionally-indicated bell V when the upper jaw D closes on the lower one. When a cylinder is between the jaws, the circuit is open and the bell will continuously sound until the cylinder is withdrawn. Insulating-pads W are interposed between the said contact-plates and the metal of the jaws.

The greatest utility of this invention is for the delivery of train-order messages directed to the employees on moving trains and for their messages to the officials and stationmen. Usually there will be a receiving-device receptacle and proximate parts, as described, in the caboose, another being carried by the locomotive.

The operation is as follows: The train-orders having been telegraphed to the station in advance of the train the order-message for the engineer is placed in one of the cylinders and put into the stationary cylinder-holder, and if the engineer has any message to leave he incloses it in another cylinder and inserts this into the moving cylinder-holder carried by the locomotive, the cylinders in all cases pointing rearward. As the shelf on the car sweeps over the stationary shelf the cylinder in the stationary holder is stripped by this movement therefrom, enters the receiving device, sounds the bell, as described, and passes on to the receptacle. A moment later the operative end of holder jaw or lever D rides down the incline into the moving cylinder-holder, catches by the butt-end the cylinder therein, and drags it back into the stationary holder, where by separating the contact-points it maintains a continued ringing until withdrawn. The stationman promptly removes it and substitutes the other cylinder containing the orders for the conductor or other trainmen. When the caboose comes along, the same operation is repeated, the orders passing to the interior of the car and the message of the trainmen being substituted for it. The square end of the recess in jaw D is useful in insuring the withdrawal of the cylinder from the traveling cylinder-holder.

The shelves and jaw D may be made either of wood or of metal. In the former case no insulating-pads are needed. Of course divers other small articles may be delivered in this way; but practically a cone-tipped cylinder, such as shown, is the most convenient.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a cylinder-receiving device and provided with a spring operating from one side of the receiving-passage against the entering cylinder, carried by a train, a stationary spring-pressed cylinder-holder arranged to deliver the cylinder thereto as the train passes, substantially as set forth.

2. In combination with a cylinder-receiving device carried by a train, a stationary spring-pressed cylinder-holder arranged to deliver

the cylinder thereto as the train passes, and contacts forming part of an electric alarm-circuit and mounted on the parts of the said holder in order that the closing of the latter may bring these contacts together and thereby sound the alarm, substantially as set forth.

3. In combination with a cylinder-receiving device carried by a train, a fixed shelf, a spring-pressed pivoted jaw or lever which closes on said shelf, forming a stationary yielding holder for a cylinder, the proximate ends of the said jaw and shelf being beveled in opposite directions to provide a flaring mouth, substantially as set forth.

4. In combination with a receiving device on a train, a stationary cylinder-holder consisting of a spring-pressed jaw and a shelf, the said jaw being recessed to fit on a cylinder and overhang its open end preventing accidental dislodgment, substantially as set forth.

5. In combination with a cylinder-holder carried by a train, a stationary cylinder-holder consisting in part of a spring-pressed lever adapted to enter the former holder, remove the cylinder therefrom and retain it by clasping it against a rigid platform or shelf, substantially as set forth.

6. In combination with a pair of springs carried by a train and adapted to hold a message-cylinder between them and an incline leading down to said springs, a jaw pivoted to a stationary device along the track and adapted to slide down the said incline, enter between the said springs and remove the cylinder therefrom, and a shelf which forms the lower jaw of the stationary cylinder-holder to receive and retain the cylinder thus removed, substantially as set forth.

7. In combination with a stationary cylinder-holder for delivering train-messages, a receiving device carried by the train, a passage leading inward therefrom, an interior receptacle below the inner end of the said passage, and an upwardly-bent guard-plate at the rear end of the said receptacle to prevent the cylinders from flying out of the latter, substantially as set forth.

8. A removable exterior shelf adapted to be carried by a car and provided at one end with a receiving device for message-cylinders and at the other with a cylinder-holder, also with a passage leading inward from said receiver to a receptacle within the car, substantially as set forth.

9. In combination with a bell attached to a car message-cylinder receiver having an open channel with a movable piece in the inner end of its mouth and intervening devices whereby a cylinder in entering said channel and moving the said piece laterally will ring the bell, substantially as set forth.

10. In combination with a cylinder-receiver provided with an open channel and an inwardly-inclined plate in one side thereof, a pin sliding through the wall of a car and arranged in contact with said spring, a second spring acted on by the movement of said rod, and a bell-hammer operated by the pressure of this latter spring, substantially as set forth.

11. A stationary shelf and a shelf carried by a car, both being beveled at the ends and one adapted to slide over the other, in combination with a cylinder-receiver and a cylinder-holder formed in or attached to the car-carried shelf and a spring-pressed pivoted jaw or lever forming with the stationary shelf a cylinder-holder, the said jaw having also a square end recess on its under side and operating also to withdraw a cylinder from the holder on the said car-carried shelf, substantially as set forth.

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

PETER P. SHIVES.

Witnesses:
D. A. COVALT,
SHADE TRUAX.