

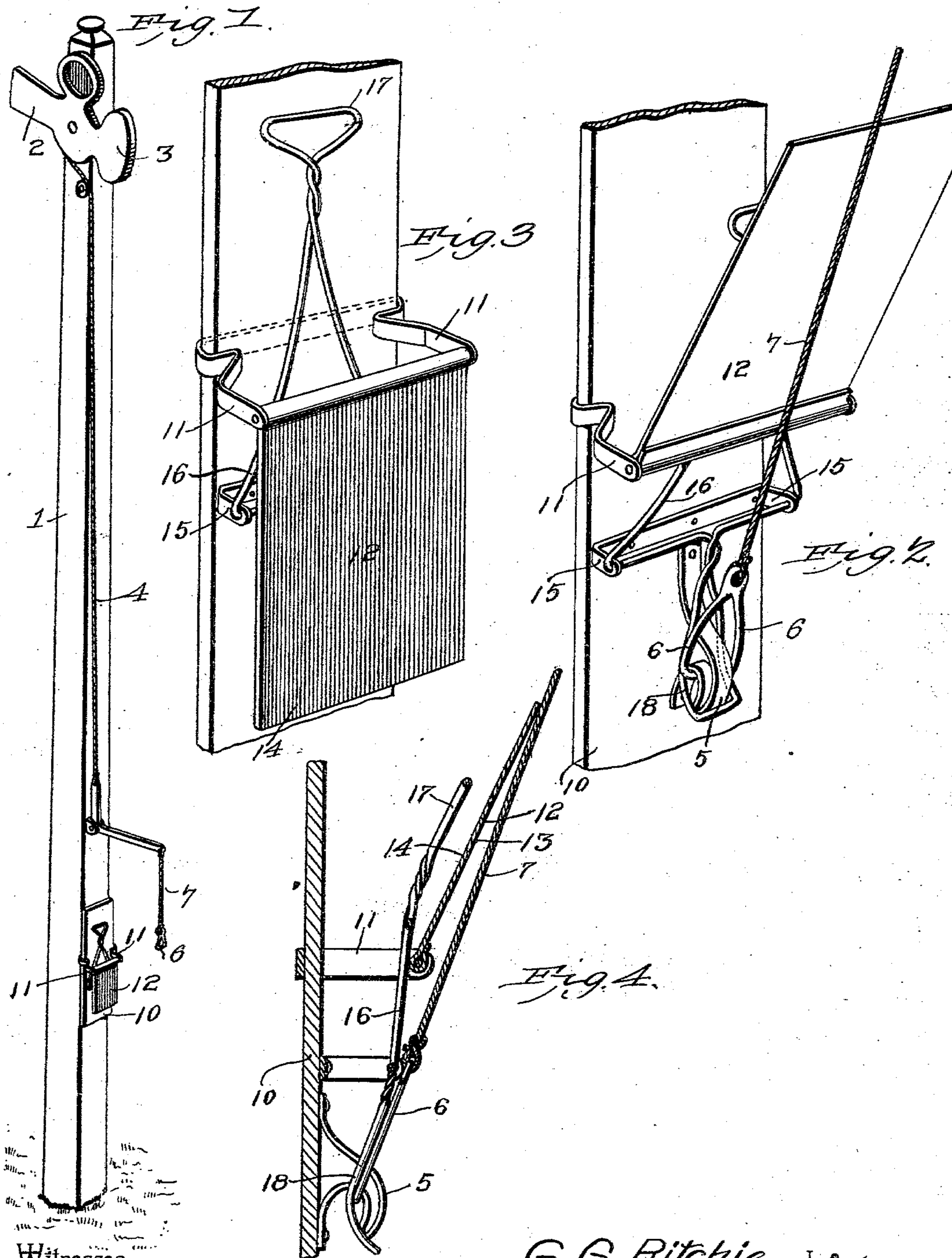
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Patented Mar. 4, 1902.

G. G. RITCHIE.
RAILROAD SIGNALING DEVICE.

(Application filed Jan. 8, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

GAINES GREENE RITCHIE, OF SANGAMON, ILLINOIS.

RAILROAD SIGNALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 694,893, dated March 4, 1902.

Application filed January 8, 1902. Serial No. 88,925. (No model.)

To all whom it may concern:

Be it known that I, GAINES GREENE RITCHIE, a citizen of the United States, residing at Sangamon, in the county of Macon and State of Illinois, have invented a new and useful Railroad Signaling Device, of which the following is a specification.

My invention relates to certain improvements in railroad signaling devices, more especially of the type used for block signaling, and has for its principal object to provide a semaphore or other signal with an attachment adapted to be operated automatically when the semaphore is changed and to serve as a warning for the operator to prevent the movement of the semaphore to safety position by inadvertence or accident.

With this and other objects in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a safety attachment for semaphores, showing the same applied to a semaphore-signal of ordinary construction. Figs. 2 and 3 are perspective views illustrating the attachment in its different positions. Fig. 4 is a detail view of the hook for securing the semaphore cord or rope and illustrating the construction of the device for operating the safety attachment.

Similar numerals of reference are employed to indicate corresponding parts throughout the several views.

1 indicates a semaphore-post having at its upper end a pivoted semaphore-blade 2 of the usual construction and provided with a counterbalance-weight 3, which normally serves to move the semaphore-blade to a horizontal or danger position when the operating-cord 4 is released. At or near the lower portion of the post is secured a hook 5, on which may be placed a ring 6, secured to the lower end of the semaphore-cord, the parts being arranged to operate in the ordinary manner—that is to say, when the cord is pulled and the ring is engaged on the hook 5 the semaphore-blade will be held down, or in safety position and signal to the train that the track is clear. When the ring is re-

leased from the hook, the counterbalance-weight will move the semaphore-arm to a horizontal position and signal the train to stop, this being done when the operator has orders for the train or when the block is not clear. In devices of this class no signals are employed to indicate the exact position of the semaphore-arm and an operator will sometimes, after the passage of a train to which he has delivered orders, will inadvertently or unconsciously move the arm to the safety position and permit a following train to enter an occupied block.

The object of the present invention is to provide a danger or warning signal operable by the hooking or unhooking of the semaphore-cord and which will indicate to the operator the position of the semaphore-arm and will prevent the movement of the semaphore-arm to safety position until the warning-signal has first been moved clear of the hook 5.

In carrying out my invention I employ a suitable base-plate 10, at the central portion of which are oppositely-disposed standards 11, to which is pivoted a flap or tag 12, which may be formed of sheet metal or other material and having a white or colorless face 13 to indicate the safety position and a red or similarly-colored face 14 to indicate the danger position. When the hook 5 is engaged by the ring 6 and the semaphore-arm is in safety position, the white face of the flap will be exposed, as indicated in Fig. 2, and when unhooked and the semaphore-arm is in the horizontal or stop position the flap will cover the hook, its red surface 14 being exposed and making it necessary for the operator to raise said flap before he can again engage the ring and hook to move the semaphore-arm to the safety position.

At a point between the hook 5 and the standard 11 are a pair of pivot-lugs 15, to which is pivoted the intermediate portion of a guard member 16, the upper end of which is provided with an enlarged eye or bearing-surface 17 for the semaphore-cord. The lower end of the guard member is provided with a loop 18, adapted to fit over the hook 5, and the body portion of said loop is curved, in the manner more clearly indicated in Fig. 4, so that the outer lower end of the loop will project some considerable distance beyond the

bill of the hook, and the bill of the hook will project inwardly beyond the outermost portion of the curved body.

In the operation of the device the semaphore-cord is drawn down and the ring 6 is engaged with the hook 5, the guard-loop 18 being forced back in order to permit of the passage of the ring. The semaphore-cord passes up in front of the flap 12 and engages with the upper portion thereof, the strain on the cord being sufficient to hold the flap elevated and exposing the white surface 13 and indicating that the semaphore-arm has been moved to safety position. To move the device to the danger or stop position, the hook and ring must be disengaged, and to accomplish this the loop 18 must be pressed to the rear, forcing the upper portion of the guard member outwardly against the flap 12, the flap falling by gravity to the danger position illustrated in Fig. 3, the flap covering the hook 5 and its red face being exposed to indicate that the semaphore-arm has been set to the danger or stop position. In order to again move the semaphore-arm to safety position, it becomes necessary to raise the guard-flap 12 in order to place the ring 6 on the hook 5, thus serving as a warning or signal to the operator and preventing a movement of the semaphore-arm to safety position by inadvertence.

The device may be applied to any form of semaphore-arm operated by a cord and intervening lever, as shown in Fig. 1, or an intervening pulley or other device may be used.

While the construction herein described, and illustrated in the accompanying drawings, presents the preferred form of the device, it is obvious that many changes in the form, proportions, size, and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of my invention.

Having thus described my invention, what I claim is—

1. A warning or signal attachment for semaphores comprising a pivoted guard-flap ar-

ranged adjacent to the cord-holding hook of the semaphore and adapted to cover the same, and means operable by the release of the cord for moving said flap to a position over said hook.

2. The combination with a semaphore having as elements an operating cord or rope and a holding-hook therefor, of a pivoted flap having sides of different color and normally occupying an elevated position when the semaphore is in safety position, and means operable by the release of the semaphore-cord for moving said flap to a position over said hook.

3. The combination with a semaphore having a holding-hook, of a pivoted flap having sides of different color, a guard arranged adjacent to the hook and adapted to move the flap to a position over said hook when depressed to effect the release of the semaphore-cord.

4. The combination with a semaphore having a holding-hook, an operating cord or rope and a ring secured thereto and adapted to be engaged on the hook, of a pivoted guard having a curved loop surrounding the hook and movable with respect thereto when the ring is released, a pivoted warning flap or signal and means for operatively connecting the loop to said flap to effect the movement of the latter to a position over said hook.

5. The combination with a semaphore-hook, its cord and attached ring, of the pivot-stands 11, a flap pivoted thereto and having different colors on its opposite sides, pivot-lugs 15 arranged between the standards and the hook, and a guard member pivoted in said lugs, said guard member having a lower loop adapted to embrace the hook, and an upper enlarged portion adapted to engage the rear face of said flap.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GAINES GREENE RITCHIE.

Witnesses:

FRANK E. DANBURY,
AUGUSTUS VEECH.