(No Model.)

P. G. STUART.

SEMAPHORE SIGNAL.

No. 479,316. Patented July 19, 1892.

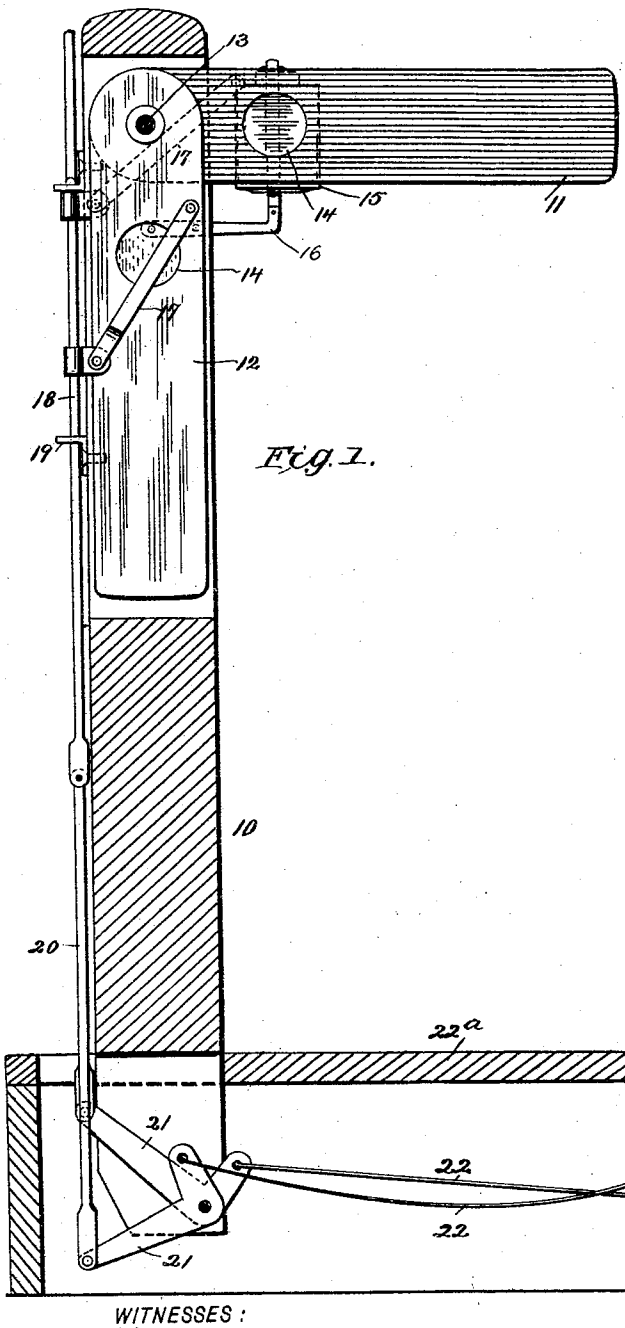


Fig. 1.

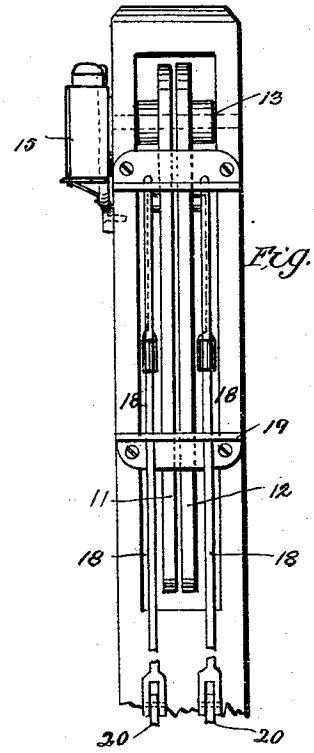
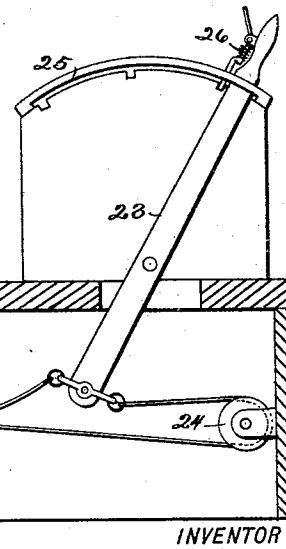


Fig. 2.



WITNESSES:

F. McArdle

C. Sedgwick

INVENTOR

P. G. Stuart

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PERRY G. STUART, OF FITCHBURG, ASSIGNOR OF ONE-HALF TO H. PRENTICE KENDALL, OF STERLING, MASSACHUSETTS.

SEMAPHORE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 479,316, dated July 19, 1892.

Application filed July 30, 1891. Serial No. 401,172. (No model.)

To all whom it may concern:

Be it known that I, PERRY G. STUART, of Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and Improved Semaphore-Signal, of which the following is a full, clear, and exact description.

My invention relates to improvements in semaphore-signals, such as are placed alongside of a railroad-track to signal the engineer; and its object is to produce a signal of this character which is positive in its operation, which may be easily worked, which is of simple construction, and which may be very cheaply made.

To this end my invention consists in a semaphore-signal constructed substantially as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both views.

Figure 1 is a vertical section of the entire apparatus, showing the interior mechanism in side elevation. Fig. 2 is a broken rear elevation of the standard or signal-post, showing the semaphore-arms in a depending position therein.

The standard or signal-post 10 is arranged adjacent to a track in the usual way, and it is hollow. In the upper end of the standard are pivoted the semaphore-arms 11 and 12, which are adapted to swing into a horizontal position, so as to project from the standard, and the arms are pivoted on a common pivot-pin 13, which extends transversely through the upper end of the standard. The arms are differently colored, being painted in the usual way, and each arm has an aperture 14 therein, which is closed by some transparent material colored to correspond with the color of the semaphore-arm. These openings or apertures 14 are adapted to align horizontally with a lantern 15, which is suspended on a bracket 16, which projects from the front side of the standard. Each arm connects by means of a short lever 17 with a vertical rod 18, which is held to move in suitable guide-keepers 19 on the back of the standard, and the rod is pivoted at its lower end to another rod 20, which connects with the long arm of a bell-crank 21, which is pivoted at the bottom of the standard. Each semaphore-arm is connected in the manner described, and the short arms of the bell-cranks 21 connect by cords or wires 22, which extend through a suitable casing 22^a, with a swinging lever 23, one of the cords or wires being made to pass over a guide-pulley 24 in the rear of the lever, and it will thus be seen that by moving the lever in one direction the semaphore-arms may be moved in opposite directions. The lever 23 is held to move on an ordinary quadrant 25 in the usual way, and is held in a desired position on the quadrant by means of the usual spring-latch 26. The lever 23 and the connecting cords and levers are adjusted in relation to the semaphore-arms so that when the lever 23 is in a central position on the quadrant both the semaphore-arms will drop into a vertical position within the standard. By moving the lever off the center of the quadrant in one direction one of the arms will be raised, and as the lever is moved back toward the center of the quadrant the arm will descend, and when the center of the quadrant is reached the arm will be down, and as the lever moves past the center in the opposite direction the other arm will ascend. This raising of the semaphore-arms is effected by tilting the bell-cranks 21, thus raising the jointed rods 18 and 20 and causing the levers 17 to push upward and outward on the semaphore-arms. At night when the lantern is lighted its light shining through the glazed aperture will signal the engineer of a passing train, so that the signal is as operative at night as in the day-time.

It will be understood that the hand-lever 23 may be arranged in a signal-house at any distance from the semaphore and that connections may be made with the lever in the manner described.

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

1. In a signal, the combination, with a standard and semaphore-arms pivoted thereto, of vertically-sliding rods at one side of the standard, links pivoted to the semaphore-arms and to the rods, bell-crank levers to which the lower ends of the sliding rods are pivoted, a

pulley, a cord or wire secured to the bell-crank levers and passing over the said pulley, and an operating-lever connected directly to the said cord or wire, substantially as described.

2. A semaphore-signal comprising a chambered standard, a lantern secured to the standard, two apertured semaphore-arms pivoted in the chamber of the standard, vertically-sliding rods on one side of the standard, links pivoted to the semaphore-arms and to the ods, bell-crank levers to the longer arms of which the sliding rods are pivoted, a pulley, a cord or wire secured to the short arms of the bell-crank levers and passing over the pulley, and an operating-lever secured directly to the cord or wire, substantially as herein shown and described.

PERRY G. STUART.

Witnesses:
HARRIS C. HARTWELL,
ARTHUR E. SMITH.