(No Model.)

T. L. CHAPMAN.

RAILROAD SEMAPHORE SIGNAL.

No. 381,333. Patented Apr. 17, 1888.

Fig. 1

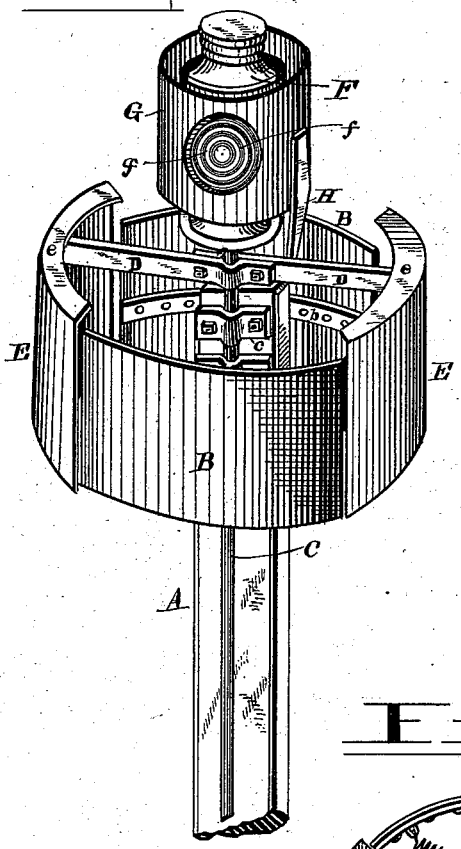


Fig. 2

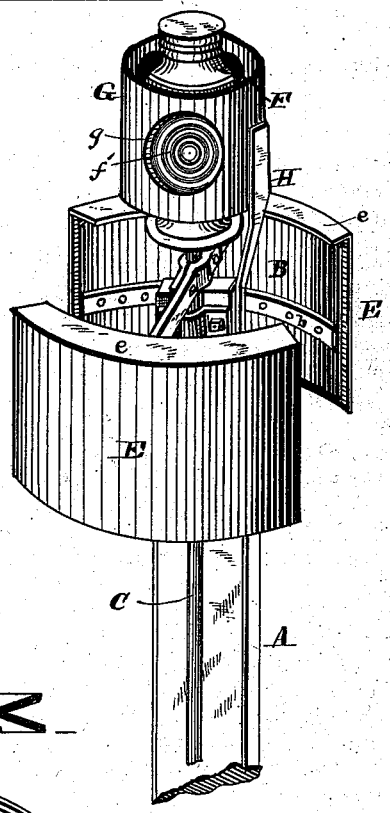
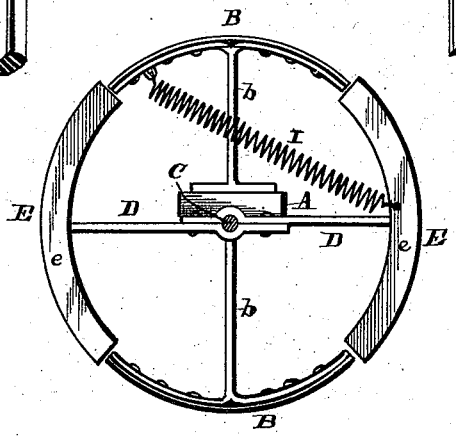


Fig. 3



Witnesses.
A. E. Towell.
F. T. F. Johnson.

Inventor.
T. L. Chapman.
By his Attorney
T. H. Alexander.

UNITED STATES PATENT OFFICE.

THOMAS L. CHAPMAN, OF RICHMOND, VIRGINIA.

RAILROAD SEMAPHORE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 381,333, dated April 17, 1888.

Application filed December 16, 1887. Serial No. 258,133. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. CHAPMAN, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Railroad Signals; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 represents in perspective my improved railway signal or semaphore with the danger-signal displayed. Fig. 2 is a similar view thereof, the danger-signals being hidden. Fig. 3 is a plan view of the same with the lamp removed.

This invention relates to improvements in railway-switch signals, its objects being to produce a signal that can be automatically operated from the switch-rail, and in which the danger-semaphores can be clearly displayed when desired, and at other times will be entirely hidden or covered by the white or "all-right" semaphores.

To these ends the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the drawings, and concisely stated in the claims hereto appended.

Referring to the accompanying drawings by letter, A designates a supporting-post, upon the upper end of which are mounted the diametrically-opposite "danger-semaphores" B B by means of brackets *b b*, suitably secured to the post and semaphores by bolts or otherwise. The said semaphores are secured on post A to face, respectively, "up" and "down" the main track.

C is a vertical rod running up one face of post A, and held thereon by straps *c*, or other convenient means. This rod extends above the top of post A and above semaphores B B, as shown. The semaphores B B are preferably curved horizontally on arcs of a circle having rod C as its axis.

D D represent bracket-arms bolted to rod C above post A and standing diametrically to each other, and supporting at their outer ends the white or all-right semaphores E E, which are curved horizontally on arcs having rod C as their axis. The semaphores E E stand farther from rod C than semaphores B, and are adapted to move in front of the latter, as shown in Fig. 2, when rod C is properly rotated. The upper edges of semaphores E E have preferably inwardly-standing flanges *e e* of sufficient width to extend over the upper edges of semaphores B B when in the position shown in Fig. 2, which is the normal position of the signal. These flanges *e* prevent the entrance of cinders and snow and ice between the semaphores, so that the signal will not become choked or the semaphore B defaced.

On the upper end of rod C is suitably mounted a lantern, F, which has lights or eyes *f f'*, corresponding to the semaphores B and E in Fig. 1. This lantern is surrounded by a hood, G, which has opening *g* in it on opposite sides corresponding with semaphores B. This hood is supported by a bracket-arm, H, upon post A, as shown. Hood G and semaphores B are stationary with post A; but semaphores E and lantern F are movable with rod C. The white lights in said lantern stand in line with semaphores E.

The rod C is preferably connected with the switch mechanism in any proper manner, so that it will be operated automatically by the same upon opening or closing the switch. When the switch is opened, the signal shows, as seen in Fig. 1, the danger-semaphores being disclosed, and the danger-lights *f* of lantern F showing through the opening *g* in hood G. When the switch is closed, the rod C is turned, shifting therewith the semaphores E E, which entirely cover the semaphores B B, and the lantern is simultaneously shifted to show white lights *f'*. To insure the return of the semaphores E to the position shown in Fig. 1, I propose in some instances employing a spring to control the movement of rod C, which spring might be mounted on the rod; but I preferably mount it as shown in Fig. 3, in which a spring, I, is suspended between one pair of semaphores B and E, so that it will be tensioned when the signal is shifted to the position shown in Fig. 2, and will assist in causing the signal when released to return to the position shown in Fig. 1, or to "danger."

Having described my invention, I claim—

1. In a signal, the combination of two opposite fixed danger-semaphores mounted upon a supporting-post with two movable all-right

semaphores corresponding in size to the fixed semaphores and mounted upon a vertical rod, and movable to rotate horizontally therewith, whereby they can be shifted so as to cover the danger-semaphores, all constructed and arranged substantially as and for the purpose described.

2. In a signal, the combination, with the supporting-post and opposite fixed semaphores thereon, of the movable semaphores mounted upon a rod secured to said post, adapted to be shifted to cover the said semaphores, and the lantern mounted on said rod and its hood mounted on said post, all constructed and arranged substantially as and for the purpose described.

3. The combination, with the opposite fixed semaphores mounted upon a supporting-post, of the movable vertical rod on said post, and the opposite semaphores mounted on said rod by proper brackets and adapted to be shifted by said rod to cover said fixed semaphores and having inwardly-standing flanges on their upper edges, substantially as and for the purpose described.

4. In a railway-signal, the combination, with the supporting-post having opposite semaphores, B, mounted on brackets secured thereto and bent on arcs of a horizontal circle, of the vertical operating-rod secured to said post and having diametrically-opposite brackets secured thereto above semaphores B, and carrying on their outer ends the semaphores E, bent on arcs of a circle having rod C as its center, and provided on their upper edges with inwardly-standing flanges *e e*, the lamp mounted on said rod and its hood mounted on said post and provided with openings *g* on its sides adjoining semaphores B, all constructed and arranged substantially in the manner and for the purpose described.

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

THOMAS L. CHAPMAN.

Witnesses:
J. T. SMITH,
W. J. HALLER.