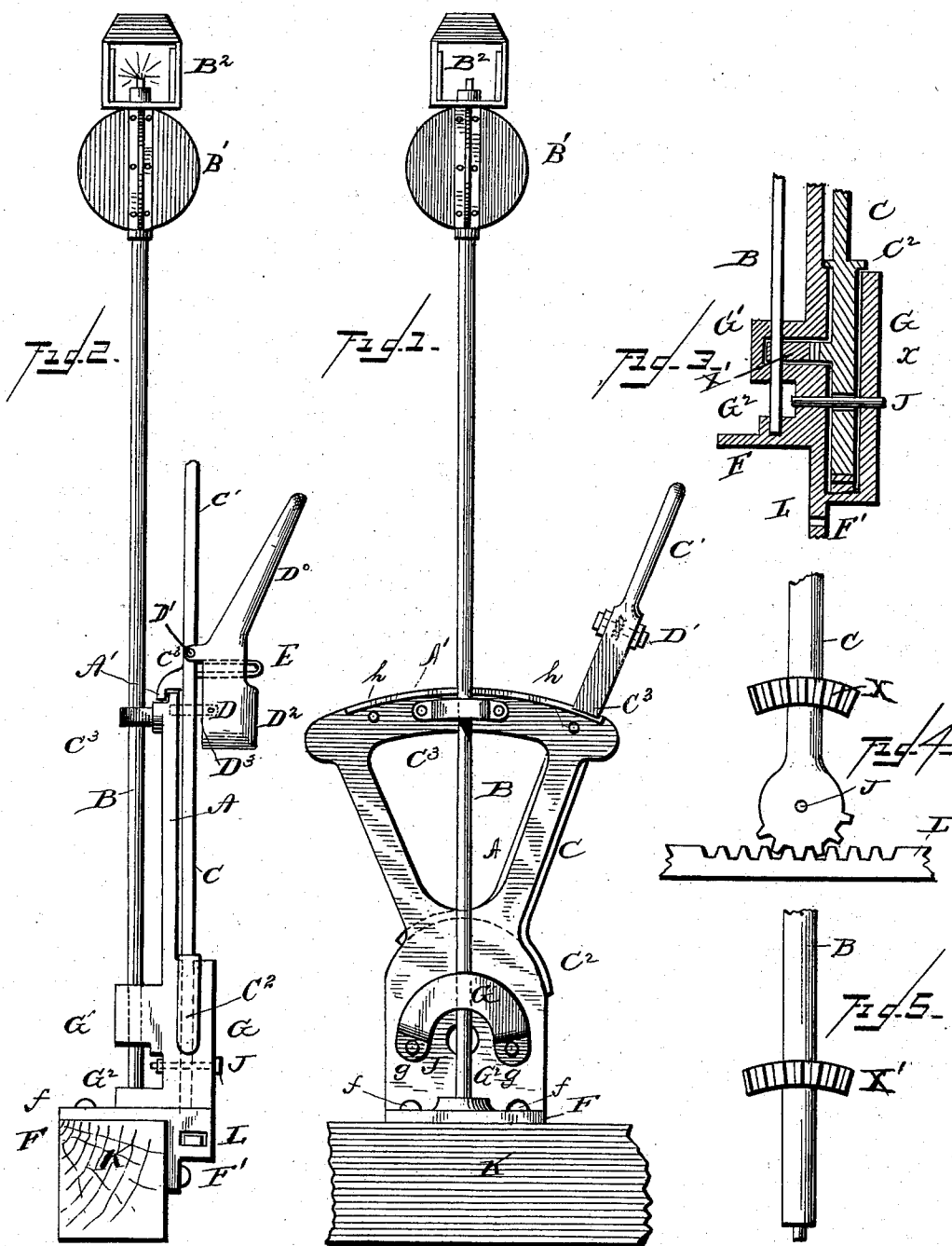


(No Model.)

N. W. BOYD.
HIGH SIGNAL SWITCH STAND.

No. 406,500.

Patented July 9, 1889.



WITNESSES
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NATHANIEL W. BOYD, OF STEELTON, PENNSYLVANIA.

HIGH-SIGNAL SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 406,500, dated July 9, 1889.

Application filed February 18, 1889. Serial No. 300,357. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL W. BOYD, a citizen of the United States, residing at Steelton, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in High-Signal Switch-Stands for Railways; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable skillful artisans to make and use the same.

My invention relates to upright signal-switch stands for railways, having disks of different colors displayed by day-time and having by night different-colored luminous signal-lanterns, as will be hereinafter described, pointed out by the claims, and illustrated by the accompanying drawings, in which—

Figure 1 represents a side elevation of my switch-stand with the high signal thereto attached; Fig. 2, an edge view of the same; Fig. 3, a vertical cross-section of the operating-lever with its toothed segment engaging the signal-shaft at segment thereon in abutments of the switch-stand. Fig. 4 is a detail view of the switch-lever provided with toothed segment for intergearing with corresponding segment on signal-shaft, and toothed below for working toothed bar; Fig. 5, a detail view of signal-shaft, broken off at top, like the top, Fig. 4, of switch-lever.

Similar letters denote similar parts in the description following.

The stand G is provided with vertical and horizontal flanges F and F', respectively, by which it may be secured to the top and side of a rectangular cross-tie K. The stand is provided also with the abutments G' and G², the latter below the other. The shaft B is journaled vertically in said abutments, and has on it the day-signal B', composed of two intersecting-disks—a white disk and a red disk—united centrally at an octagonal tube, into which the upper part of shaft B is made to fit loosely, or so as to permit its ready removal and replacing to present different faces to the same point of observation. On the summit of the eight-sided tube or socket is mounted the night-signal B², so arranged that the four sides of its lantern may correspond with the disks of the

day-signal, and that the lantern may be secured on the same octagonal socket.

The switch-operating lever C is pivoted at J, and is guided in a vertical slot in the stand G. It is provided with the circular flange C², adapted to slide on top of the arch of the stand, which arch is described with the same radius, and therefore said flange covers said slot in the stand to shield it against snow or other matter that is liable to drop into it.

The arch-head A' of the stand is a segment of a circle described from the axis J or center, and is offset or recessed on top, and the lever C is provided with a hook or arm C³, attached thereto, which is adapted to embrace the recessed part of said arch and to be stopped right and left at the ends of the recess. To said lever is pivoted by lugs or flanges D' the gravity-pawl D. The part D² is weighted and has inserted therein the fixed pin or tenon D³, which is adapted to register with a hole *h* at either end of said arch of the stand, the switch-lever also having a hole to permit the pin D³ to freely pass through it and engage the holes in the stand's arch. A staple E, fixed in the said lever, between the pivot D' and the pin D³, is adapted to freely project through a slot in the gravity-pawl D, and permits a padlock's shackle to be inserted through the surplus portion of the staple, and thus to lock the gravity-pawl and the switch-lever fast to the stand. The pawl, however, secures the switch-lever without a padlock for temporary use.

When the switch-lever is locked, the signal is also locked by the same device, as follows: The switch-lever has a toothed segment X, which engages one or more teeth X' on the shaft B in manner to rotate the shaft B exactly a quarter-turn. The shaft B is so intergearing and stopped that it is never disengaged or turned beyond the limit of the toothed segment.

I claim—

1. The switch-stand provided with recessed arch A' and with flanges F and F', adapted to embrace the cross-tie K, in combination with the lever C, pivoted to the stand at J and provided with the arm C³, adapted to hook onto the arch of the stand, and with the gravity-pawl D, pivoted to the said lever above said

arm and provided with the interlocking tenon D³, adapted to enter by gravity and register with holes *h* in the arch of the stand, and thus to lock the lever at either end of its throw, substantially as and for the purposes set forth.

2. The switch-stand formed with base adapted to rest on a single cross-tie and having the signal-shaft B journaled in abutments on the same, in combination with the operating-lever C, intergeared with said shaft by a segmental gear-connection, and with the gravity-

pawl D, pivoted to the lever and provided with the interlocking tenon D³, and extension, so that both lever and pawl-handle may be grasped instantly with the same hand, said lever being connected to work along the side of the arch-head of said stand, substantially as and for the purposes set forth.

NATHANIEL W. BOYD.

Attest:

D. C. MAURER,
THEOPHILUS WEAVER.