(No Model.)

W. R. THOMAS.

SWITCH SIGNAL.

No. 424,148. Patented Mar. 25, 1890.

Fig. 1.

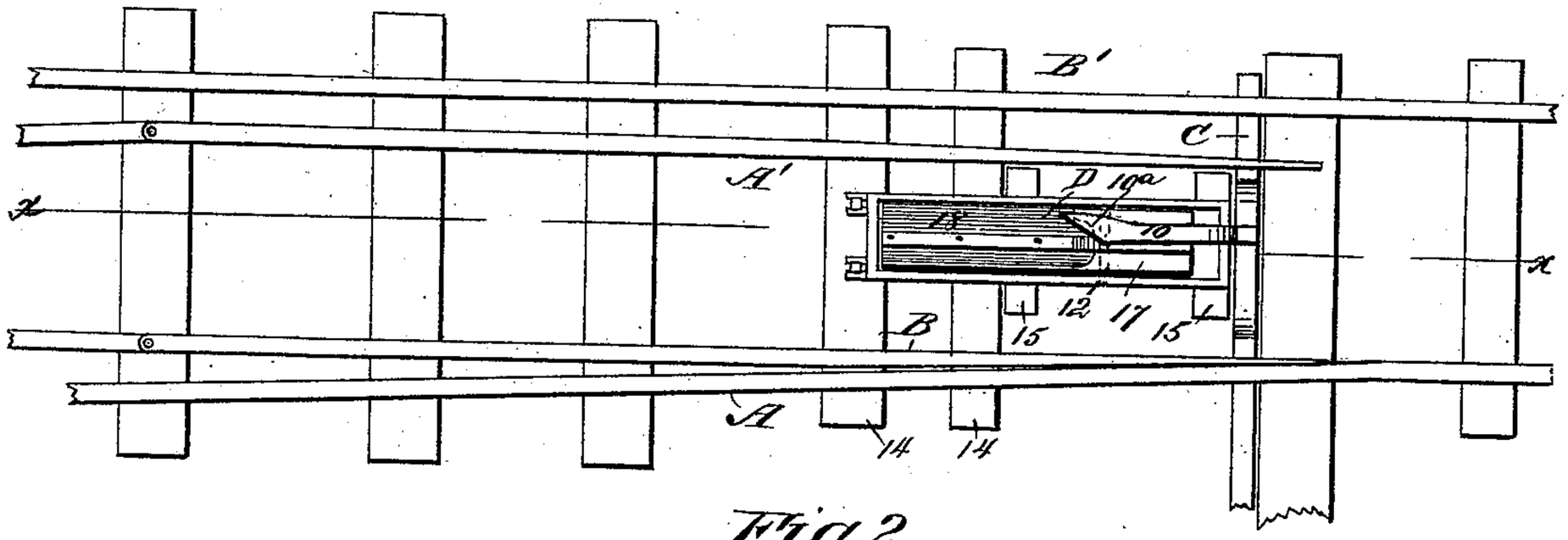

Fig. 2.

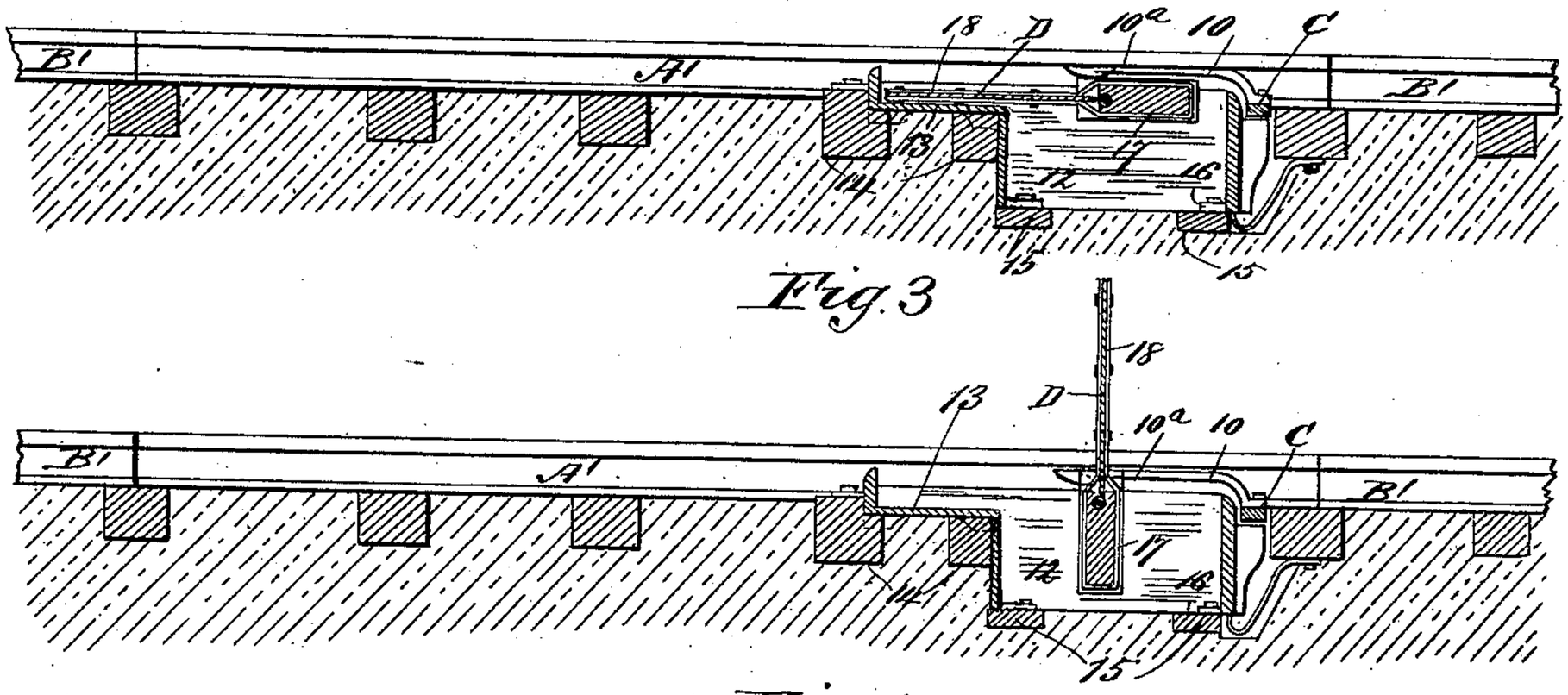

Fig. 3

Fig. 4

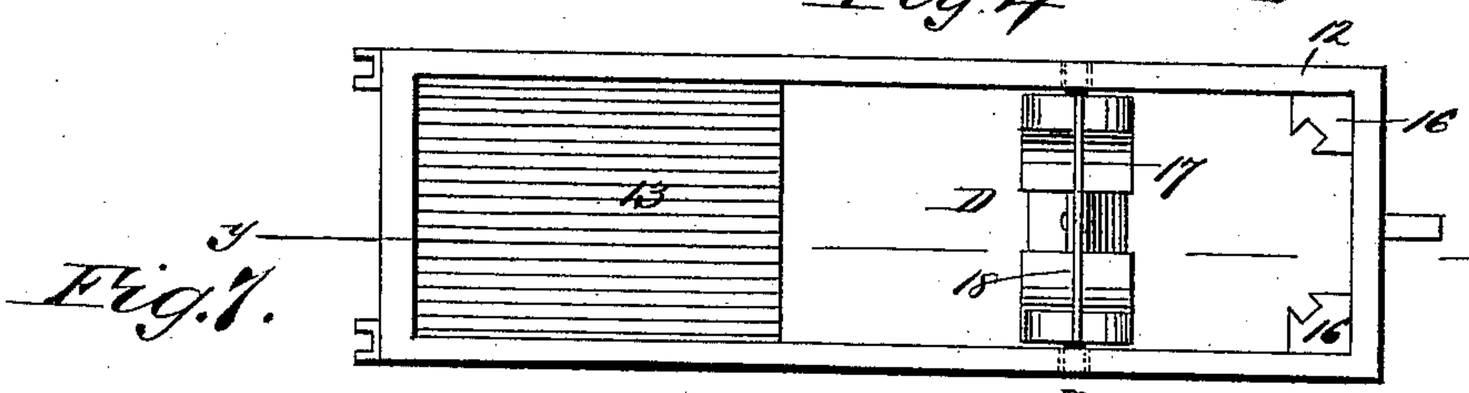

Fig. 7.

Fig. 6.

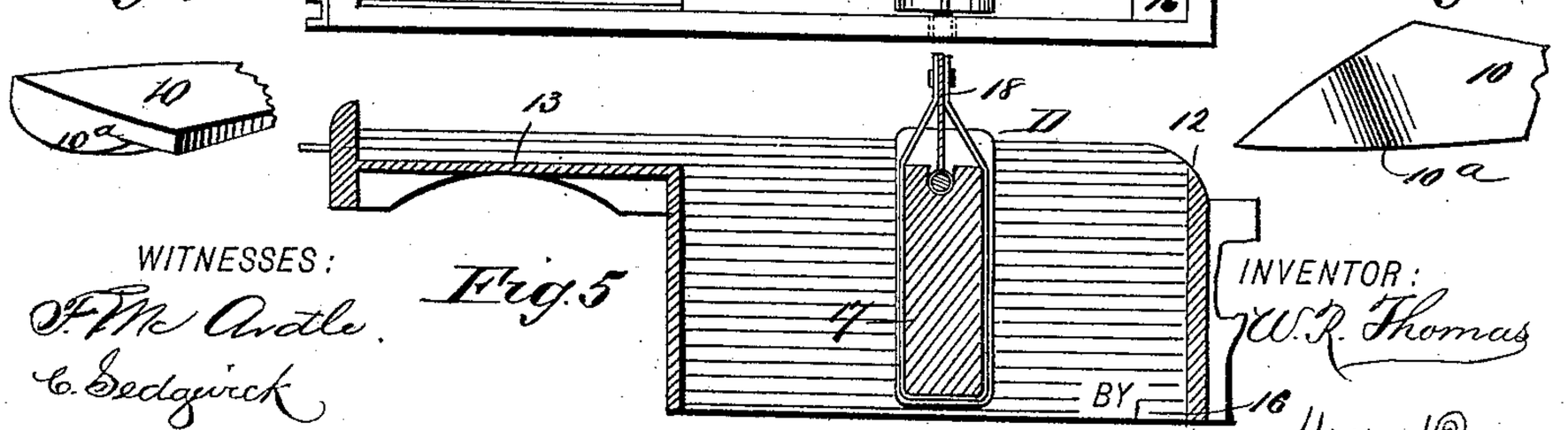

Fig. 5

WITNESSES:

F. McArdle.

C. Sedgwick

INVENTOR:

W. R. Thomas

Munn & Co

ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM R. THOMAS, OF WATERTOWN, WISCONSIN.

SWITCH-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 424,148, dated March 25, 1890.

Application filed October 11, 1889. Serial No. 326,730. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. THOMAS, of Watertown, in the county of Jefferson and State of Wisconsin, have invented a new and Improved Switch-Signal, of which the following is a full, clear, and exact description.

My invention relates to an improvement in switch-signals, and has for its object to provide a device adapted to be located between the rails of the track, which, when the switch is open, will occupy an upright position, and a further object of the invention is to so counterbalance the signal that the train may readily pass over the track when said signal is displayed, and wherein the signal will return to its vertical position immediately after the train has passed.

Another object of the invention is to so construct the signal that the switch-rod will lock it in a horizontal position when moved in one direction and release it when moved in the opposite direction.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter more fully described, and pointed out in the claims.

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

Figure 1 is a plan view of a section of a railroad track and switch, illustrating the application of the signal, the said signal being in a horizontal position and the main line open. Fig. 2 is a central vertical section through the signal, taken on the line *x x* in Fig. 1. Fig. 3 is a similar section, the signal being in position of display. Fig. 4 is a plan view of the signal-box. Fig. 5 is an enlarged longitudinal section through said signal and its boxing, taken on the line *y y* in Fig. 4. Fig. 6 is a bottom plan view of the end of the trip-arm, and Fig. 7 is a perspective view of said end.

I have illustrated in the drawings a section of a railway-track, the main rails being indicated by the letters A A′ and the switch by the letters B B′. The switch-rails at their points are moved in the ordinary manner—namely, by means of a switch-rod C, which rod is connected with any suitable form of switch-stand. Upon the switch-rod C, between the switch-rails, an arm 10 is rigidly secured at one end, adapted to extend, preferably, upwardly and outwardly at a right angle thereto, as shown in Figs. 1, 2, and 3, which arm is beveled at its outer end, and at said end is provided with a swell or projection 10^a upon its under face.

Near the switch-rod C a box 12 is buried in the ground, between the switch-rails, which box is open at the top and bottom, and provided upon one side at the upper edge with a horizontal flanged table 13. The table 13 is preferably made to rest upon two of the ties, as illustrated at 14 in Figs. 2 and 3, being spiked or otherwise secured to the said ties, and the lower end of the box proper is likewise preferably made to rest upon two ties 15, being spiked thereto through lugs 16, formed upon the inner walls of the box at its bottom, which lugs may be located at one end only, as shown in Fig. 4, or at both ends, if so desired. Between the sides of the box a signal D is pivoted, the lower end whereof is very heavy, while its upper portion bears a flag 18. The bulk of the weight of the lower section 17 of the signal is below its pivotal point, and the weight is so calculated that the flag or display section 18 will be normally held in a vertical position. The display or flag section may be integral with the lower weighted section, or attached thereto, as in practice may be found most desirable.

The entire signal is of such a length that when brought to a horizontal position it will extend virtually from the outer end of the table to the opposite end of the box.

When the switch-rails are shifted in one direction, the beveled end of the arm 10 strikes (see Fig. 3) the weighted section 17 above its pivot and gradually presses the signal down to horizontal position, as shown in Figs. 1 and 2, and holds it there until the switch-rails are shifted back to their former position. The signal is down or horizontal when the main line is open, but stands vertical when the switch is open, and trains passing over it (in either direction) tilt and hold it depressed for the time being.

When the switch is opened by the movement of the switch-rod C, the arm 10 is carried out of contact with the signal, which, upon being released, and by reason of its

lower weighted end, automatically assumes the vertical position, rendering the display or upper section visible from up or down the track, and should it be necessary for a train to pass upon the siding the engineer is informed of the fact that the switch is open, as the signal occupying the vertical position is in plain view midway of the track.

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

1. The combination, with shiftable switch-rails, a rod connecting them, and an arm secured horizontally to said rod, of a box which is fixed between the switch-rails, and a signal pivoted in said box and weighted at its lower end, whereby it is adapted to stand normally vertical and to tilt, as specified, when acted on by the aforesaid arm or by a passing train.

2. As an improved article of manufacture, a switch-signal comprising a box-like body having a table integral with one end and a signal-arm pivoted in the box-body, consisting of a lower section weighted below the pivotal point and an upper counterbalanced display-section attached to the weighted section, substantially as shown and described.

3. The combination, with the switch-rails of a railway-track, the switch-rod, and an arm attached to the said rod and projected at an angle therefrom, of a switch-signal located between the switch-rails, comprising a box-like body and a signal-arm pivoted in said body, consisting of a lower section weighted below the pivotal point and an upper counterbalanced display-section capable of extending vertically upward above the body and when brought to a horizontal position of contacting with the arm of the switch-rod, as and for the purpose specified.

WILLIAM R. THOMAS.

Witnesses:
C. B. SKINNER,
W. A. SCHLUETER.