

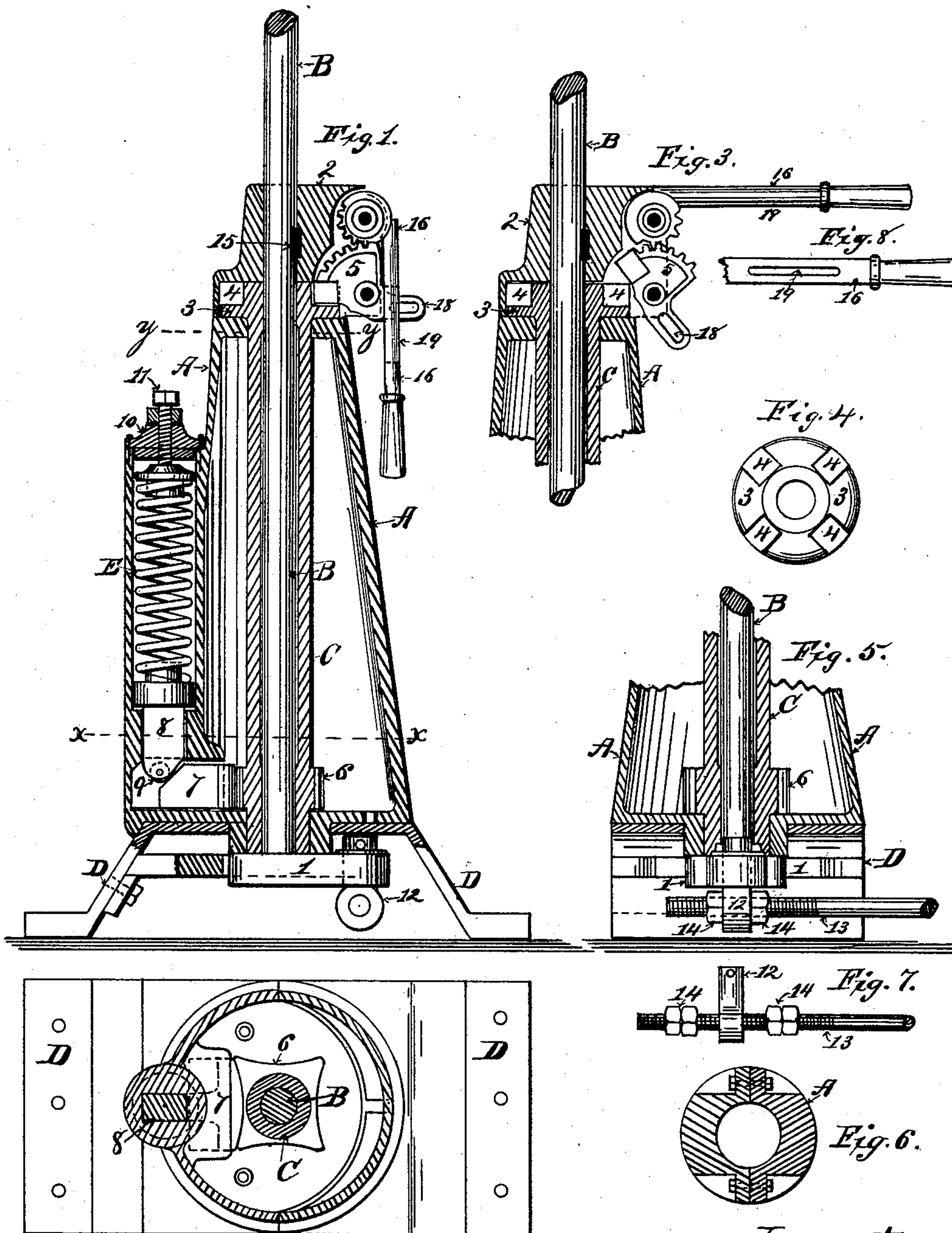
(No Model.)

W. C. MEEKER & T. R. BROWN.

RAILROAD SWITCH STAND.

No. 364,722.

Patented June 14, 1887.



Witnesses:

J. H. Peck
J. F. Wescott

Fig. 2.

Inventors

W. C. Meeker
Thomas R. Brown

UNITED STATES PATENT OFFICE.

WALTER C. MEEKER AND THOMAS R. BROWN, OF JERSEY CITY, NEW JERSEY.

RAILROAD-SWITCH STAND.

SPECIFICATION forming part of Letters Patent No. 364,722, dated June 14, 1887.

Application filed December 29, 1886. Serial No. 222,932. (No model.)

To all whom it may concern:

Be it known that we, WALTER C. MEEKER and THOMAS R. BROWN, citizens of the United States of America, and residents of Jersey City, Hudson county, New Jersey, have invented new and useful Improvements in Railroad-Switch Stands, of which the following is a specification.

Our invention relates to what are generally known as "automatic railroad-switch stands," which are especially designed to be used with what are commonly termed "split" or "pointed" switches, for the purpose of permitting a locomotive or train to automatically operate the stand, and thus set the switch right when trailing the points, in case the switch has been previously set wrong.

The construction and operation of this stand will be readily comprehended by reference to the specification and drawings.

Figure 1 is a vertical sectional view showing position of the several parts of the stand and their relation to each other when locked and ready to be operated automatically. Fig. 2 is a cross-sectional view of Fig. 1 on line *x x*. Fig. 3 is a sectional view of upper part of stand, showing position of locking-lever when in position to be operated by hand. Fig. 4 is a plan of top or head of loose sleeve, showing recesses for the reception of the locking-lever. Fig. 5 is a sectional view of lower part of stand, taken at right angles to that of Fig. 1, showing manner of attaching the connecting-bar. Fig. 6 is a cross-section of top of stand at line *y y*, showing manner of holding the parts together. Fig. 7 represents the adjustable connecting-bar and crank-pin detached from the stand. Fig. 8 is a plan view of operating-lever detached.

Referring by letters and numbers to the accompanying drawings, the body or frame A A is formed in two parts, bolted together at the top, as shown in Fig. 6, and both secured to a wrought-iron or steel base-piece, D. The stand is provided with a main shaft, B, to which are secured the crank 1 and cap or hub 2. Said shaft B passes through and journals in the hollow shaft or loose sleeve C, and is continued above the body of stand to receive a target or signal. (Not shown.)

The hollow shaft C is journaled in the main

body of the stand, and one end terminates in the head 3, which is provided with notches or recesses 4 to receive the locking-lever 5. On the said hollow shaft C is also formed the cam 6, against which rests the spring-compressor 7, the outer end of which is formed with a suitable bevel or incline to operate against the second spring-compressor, 8, which is also formed at its lower end with a bevel or incline to correspond with compressor 7. In the lower end of spring-compressor 8 is placed the anti-friction roller 9, although the two bevel surfaces would operate against each other and perform the same functions without said roller.

The spring-pocket is formed parallel with the main body of stand, and although shown in drawings as forming part of the main body of stand, yet it may be formed separately and screwed into or otherwise secured to the stand, and is so arranged that the spring E may be put in and removed at pleasure by simply removing the cap 10, thus enabling us to put in such spring or springs as are required for the work to be performed, and obviates the necessity of taking the stand apart when the spring is put in place.

We do not desire to claim or specify any particular plan for securing the cap 10 to the spring-chamber, as any of the well-known devices for securing same may be used.

In the present switch-stands it is necessary to insert the spring when the stand is being put together, so when a change of spring is required the stand has to be taken apart, whereas by this method the stands can be manufactured complete without the spring, and a spring inserted to suit the work required. The tension of the spring may be regulated by a set-screw, 11.

The crank 1 is provided with a crank-pin, 12, which rotates in the same, one end of which forms an eye through which the switch-connecting rod 13 passes, and is secured thereto by adjusting-nuts 14.

The advantage in the use of the adjustable connecting-rod is that the stand may be placed in approximate position and the bar adjusted to the distance after the stand is secured to the tie.

In cases where the stand has a greater throw than the switch, lock-nuts may be placed on

the bar 13, leaving such space between the crank-pin 12 and the nuts 14 as will equalize the throw of the stand and the switch, as shown in Fig. 7.

- 5 The cap 2 is secured to the shaft B by means of the key 15 or other suitable device, in which are pivoted the operating-lever 16 and locking-lever 5.

The operating-lever 16 is provided with 10 teeth on the periphery of the hub, which mesh into corresponding teeth on the locking-lever 5, so that when the lever 16 is raised to position shown in Fig. 3 the locking-lever 5 is lifted out of the recess 4, in the head 3, thus 15 permitting the stand to be operated by hand.

The locking-lever 5 is also provided with a loop end, 18, which passes through a slot, 19, in lever 16, to which the said lever 16 is secured by means of a padlock, as shown in Fig. 1.

- 20 The operation of the stand is as follows: The stand being connected to the switch by means of the connecting-bar 13, to throw the switch by hand it is simply necessary to raise the lever 16 to position shown in Fig. 3, which 25 operation will lift the locking-lever 5 out of recess 4, and thus sever all connection between the switch and spring. Then rotate said lever 16 to the next quarter of the circle, when the locking-lever 5 will be over the next recess 4, 30 and will enter it as soon as the said lever is lowered, and will then be ready to work automatically.

The automatic operation of the stand is as follows: The lever 16 being locked down, as 35 shown in Fig. 1, a train passing through the switch, (trailing the points,) if set wrong, will open the points, move the connecting-bar 13, and crank 1 thus rotate the shaft B, to which is secured the cap 2, to which the lever 16 and 40 locking-lever 5 are secured. Said locking-lever 5, connecting with head 3, as before described, causes the rotation of the sleeve C and cam 6, which compresses the spring through the further agency of the spring-compressors 7 and 8, 45 thus throwing the points to the opposite track by the rebounding of the spring. Thus it will be seen by this method a superior and more adaptable switch-stand is constructed and readily adjusted to meet the requirements.

- 50 Having fully described our invention, what we claim is--

1. In a railroad switch stand, the case A, consisting of two parts and provided with a spring-chamber on the outside thereof, having

therein the spring E and compressor 8, in 51 combination with a horizontal compressor, 7, and cam 6, secured to the hollow shaft C, substantially as and for the purpose specified.

2. In a railroad-switch stand, the case A, having a detachable base or foot, D, and provided with a spring-chamber having the spring E and compressor 8, in combination with a horizontal compressor, 7, and cam 6, secured to the hollow shaft C, substantially as and for the purpose specified. 65

3. In a railroad-switch stand provided with a spring-chamber, the detachable cover 10, fitting on the end of said chamber for receiving the pressure of the spring E, substantially as and for the purpose specified. 70

4. In a railroad-switch stand provided with a spring-chamber, the detachable cover 10, fitting on the end of said chamber and provided with an adjusting-screw, 11, for receiving the pressure of the spring E, substantially as and 75 for the purpose specified.

5. In a railroad-switch stand, the hollow shaft C, journaled in the case A and provided with the head 3, having the notches 4 therein, in combination with the cap 2 and locking-lever 5, the said shaft C being provided with the cam 6 and surrounding the shaft B, which is provided with the crank 1. 80

6. In a railroad-switch stand, the cap 2, secured to the shaft B and provided with the 85 lever 16 and locking-lever 5, pivoted thereto and connected by teeth on the periphery of their hubs, one end of the lever 5 fitting into the notches 4 of the head 3, the other end being provided with a loop, 18, which passes 90 through the slot 19 in the lever 16, substantially as and for the purpose specified.

7. In a switch-stand, the crank 1, provided with a loose crank-pin, 12, having an eye in one end thereof, in combination with the adjustable rod 13, passing through said eye and adjusted by the nuts 14, substantially as and for the purpose specified. 95

In testimony that we claim the foregoing as our invention we have signed our names, in 100 in presence of two witnesses, this 24th day of December, A. D. 1886.

W. C. MEEKER.

THOMAS R. BROWN.

Witnesses:

THOS. H. WILLIAMS,

A. A. FRANCK.