(No Model.)

N. O. GOLDSMITH.

SWITCH STAND.

No. 458,452. Patented Aug. 25, 1891.

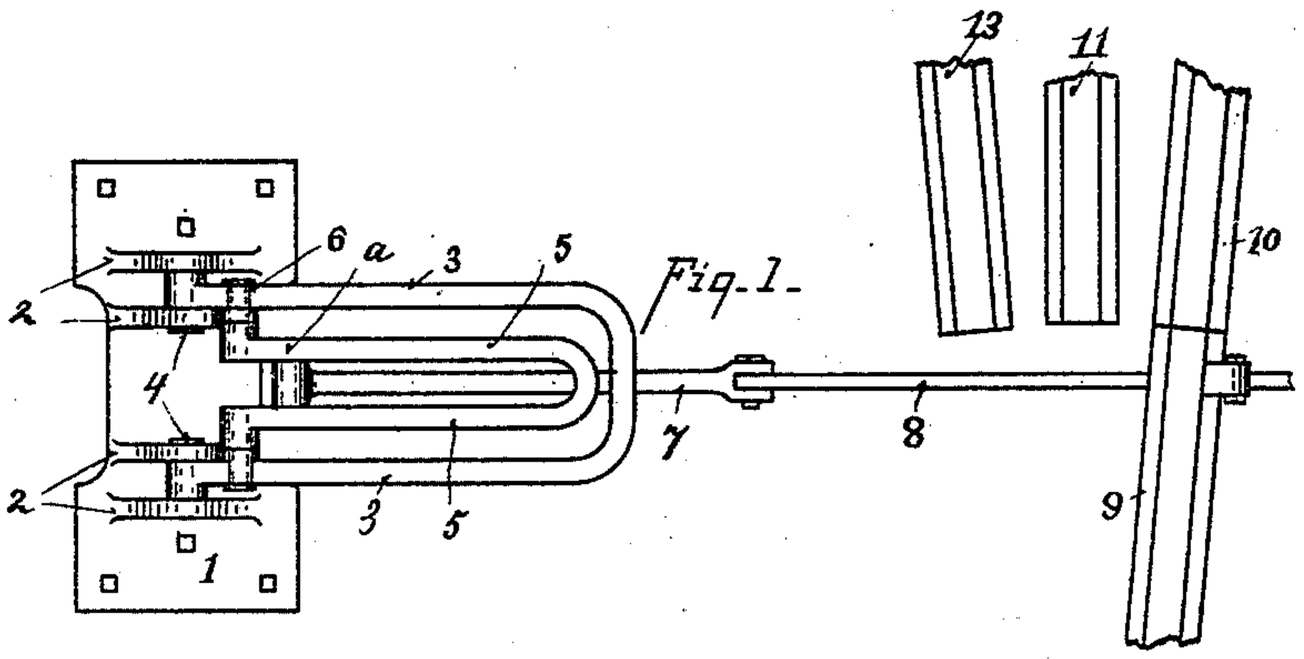

Fig. 1.

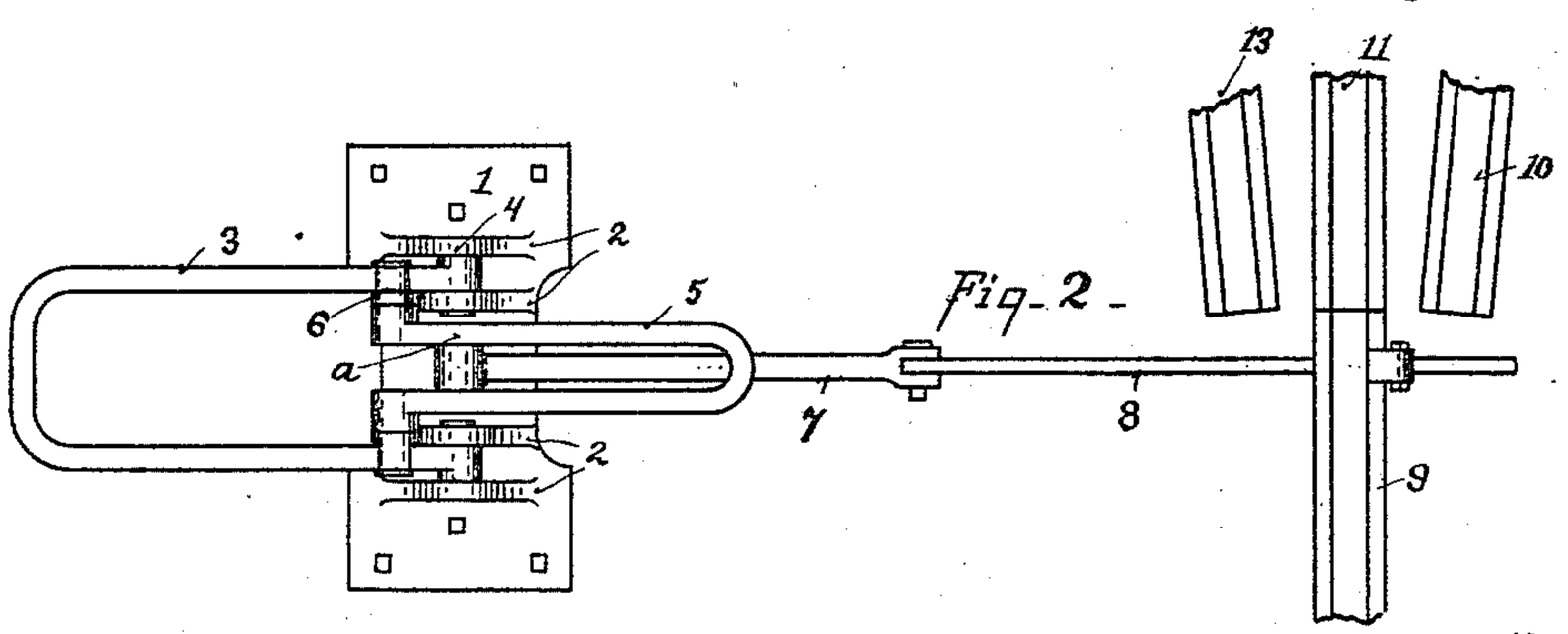

Fig. 2.

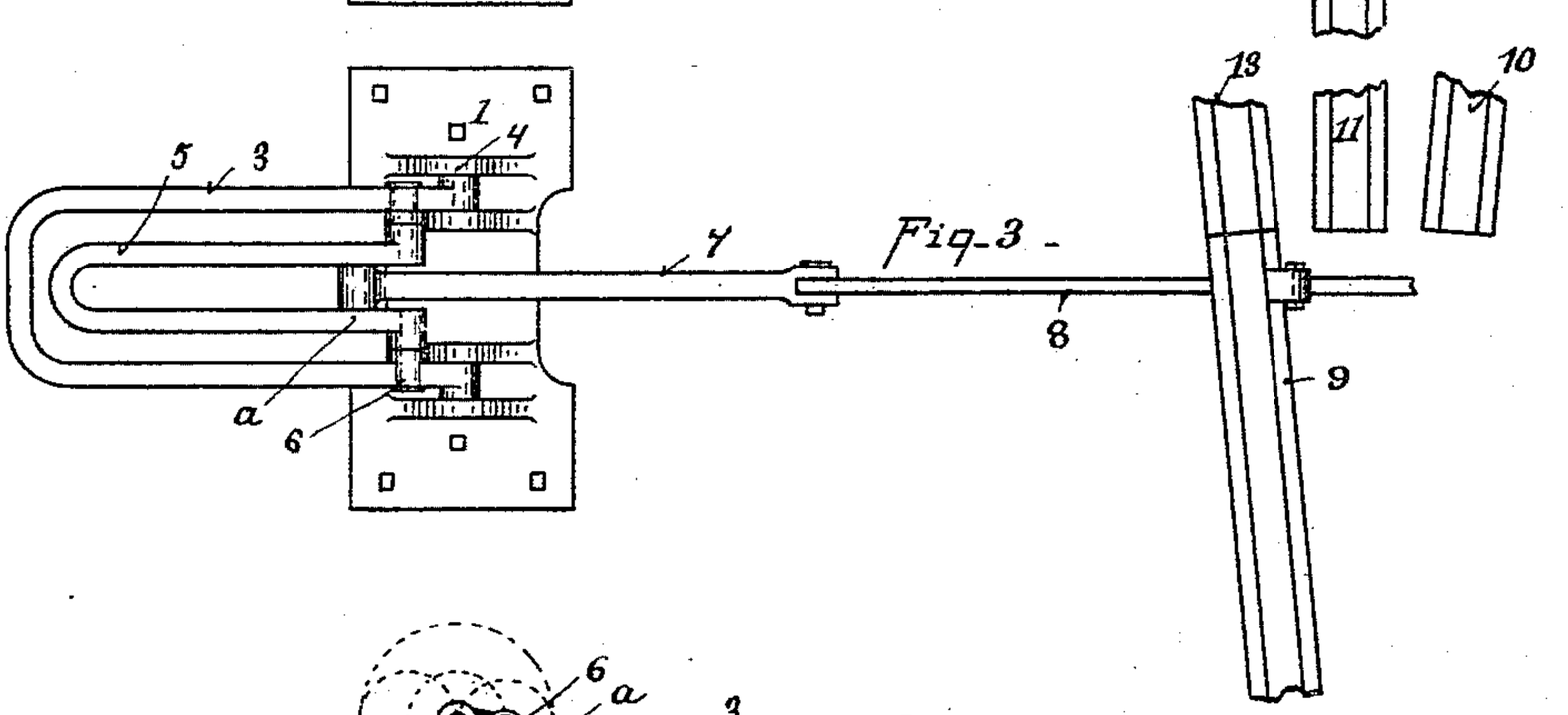

Fig. 3.

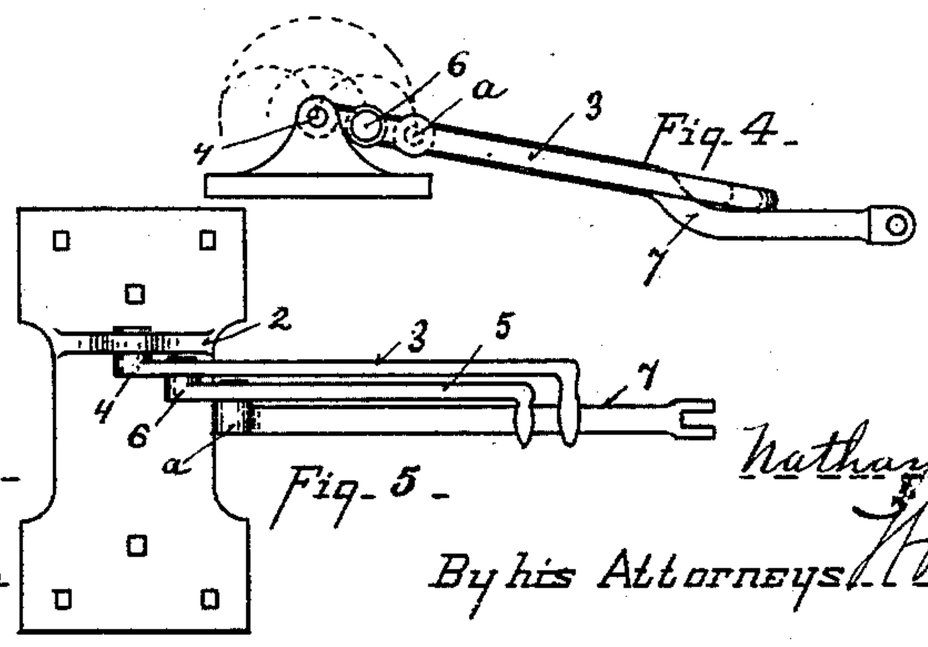

Fig. 4.

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

NATHANIEL O. GOLDSMITH, OF CINCINNATI, OHIO, ASSIGNOR TO THE WEIR FROG COMPANY, OF SAME PLACE.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 458,452, dated August 25, 1891.

Application filed January 27, 1891. Serial No. 379,256. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL O. GOLDSMITH, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Switch-Stands, of which the following is a specification.

My invention relates to that class of switch-stands which are called "low-down stands," chiefly used in yards.

The object of the invention is to provide a low-down three-throw-switch stand, and in the accompanying drawings it is shown as adapted to be used for stub-switches.

The various features of my invention will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top plan view of my improvement, showing the switch stand and rails in normal position. Fig. 2 is a similar view showing the switch-rail moved by one throw. Fig. 3 is a similar view showing the third position of the switch stand and rails. Fig. 4 is a side elevation of Fig. 1. Fig. 5 is a modification of the switch-stand shown in Figs. 1, 2, and 3.

1 represents the base-plate of the switch-stand. 2 represents ears or ledges cast on the same, in which a bearing is formed for the crank-pin or journal.

3 represents a lever, the end of which is bent at right angles, which forms a crank, the shaft of which journals in the ears 2.

5 represents a secondary lever, the inner end of which is bent at right angles to form a crank 6, which journals in the lever 3, the two levers forming a compound crank. I have shown two forms of levers. In Fig. 4 the levers are single, and in Figs. 1, 2, and 3 they are shown as duplex or U-shaped levers, having the cranks and centers at either end, the inner lever 5 nesting within the outer lever 3. Either form of construction may be employed.

7 represents a pitman hinged to lever 5.

8 represents a switch-bar pivoted to the pitman 7.

9 represents the switch-rail.

10 represents the main-track rail; 11, a secondary branch rail, and 13 a third branch rail, with which rail 9 respectively engages.

It will be observed that the centers *a*, 4, and 6 are on a line with the center of the pitman when the switch is in normal position, (shown in Fig. 4,) forming a lock or dead-center to resist the side-thrust of the train.

The switch-stand is operated as follows: If lever 3 be turned over, it will move on the centers 4 and 6, which will move the pitman 7 and the lever 5 horizontally and will break the contact of the switch-rail 9 with rail 10 and connect the same with rail 11. If now the secondary lever 5 be turned over, the pitman 7 will be advanced another step, breaking connection of the rail 9 with rail 11 and bringing it into contact with rail 13. The levers 3 and 5 may be moved together and the switch-rail 9 moved from contact with rail 10 and into contact with rail 13. When the parts are in position shown in Fig. 2, the lever 3 may be thrown back and move the switch-rail 9 to first position. Thus three different independent throws are obtained by the compound crank mechanism herein described.

Having described my invention, what I claim is—

1. In a three-throw-switch stand, the combination of the lever 3, pivoted to the base of the switch-stand, a lever 5, pivoted to lever 3, and a pitman 7, pivoted to lever 5, forming a compound three-throw switch, substantially as specified.

2. In combination with the duplex lever 3, pivoted to the switch-stand, the duplex lever 5, pivoted to lever 3, and the pitman 7, pivoted to the duplex lever 5, substantially as specified.

In testimony whereof I have hereunto set my hand.

NATHANIEL O. GOLDSMITH.

Witnesses:
T. SIMMONS,
C. W. MILES.