

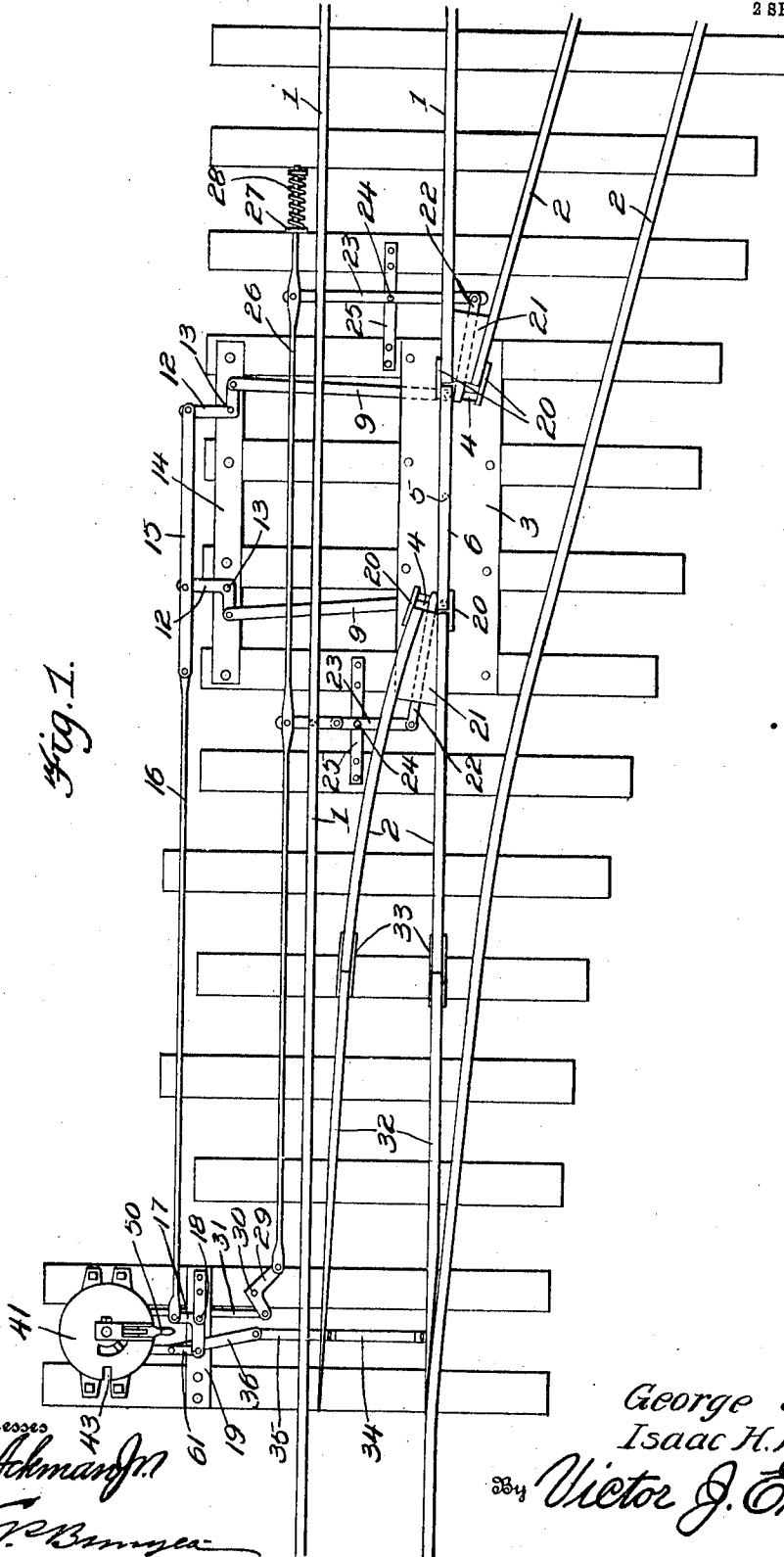
G. SHIMP & I. H. WILTON.
RAILWAY SWITCH.
APPLICATION FILED JULY 15, 1909.

957,115.

Patented May 3, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

Geo. A. Schmandt

E. E. Bunker

Inventors

George Shimp.
Isaac H. Wilton.

By *Victor J. Evans*

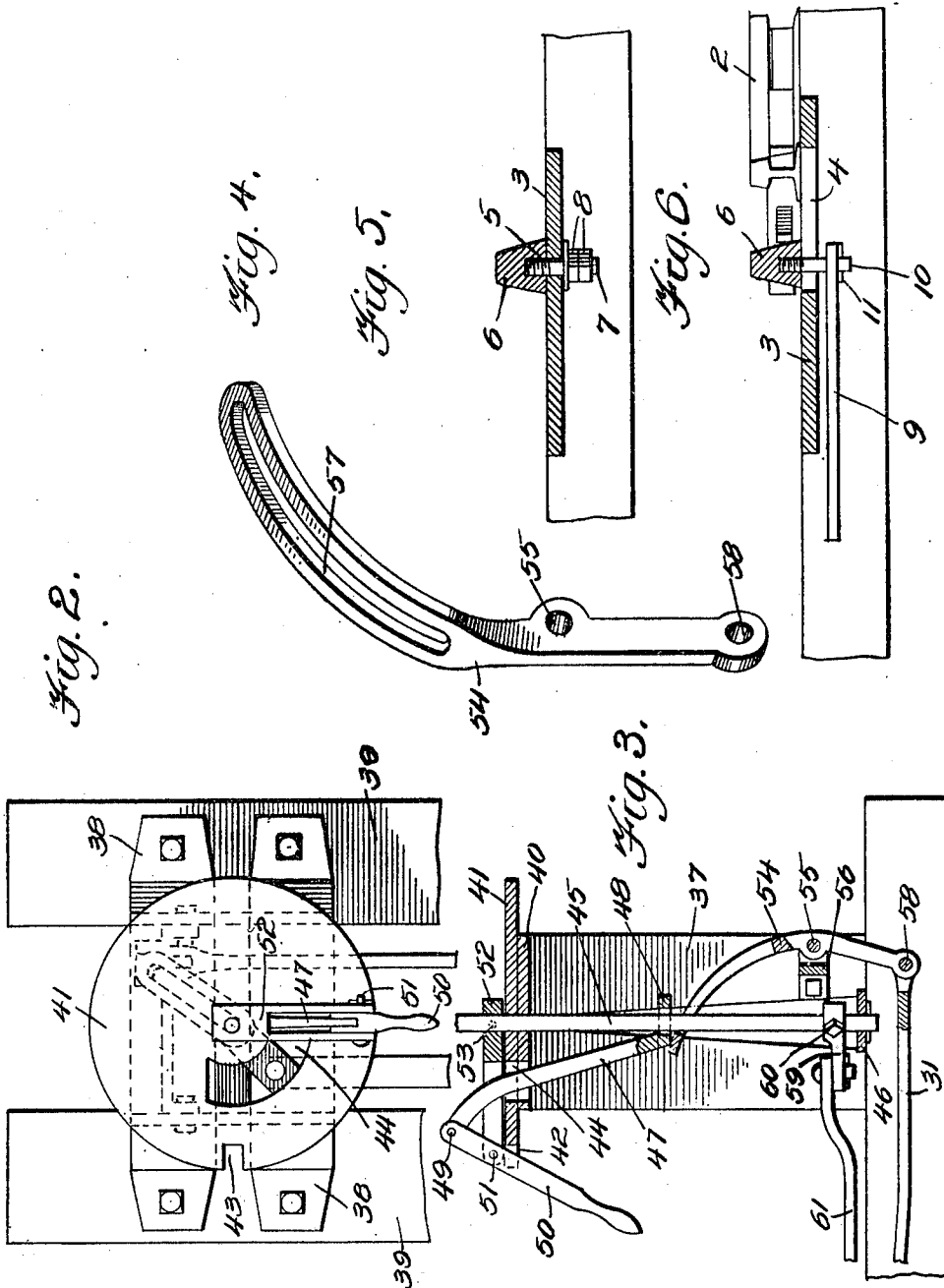
Attorney

G. SHIMP & I. H. WILTON.
RAILWAY SWITCH.
APPLICATION FILED JULY 15, 1909.

957,115.

Patented May 3, 1910.

2 SHEETS—SHEET 2.



Witnesses

W. H. Bump
W. H. Bump

Inventors
George Shimp.
Isaac H. Wilton.
304 Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

GEORGE SHIMP AND ISAAC H. WILTON, OF PATOKA, ILLINOIS.

RAILWAY-SWITCH.

957,115.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed July 15, 1909. Serial No. 507,777.

To all whom it may concern:

Be it known that we, GEORGE SHIMP and ISAAC H. WILTON, citizens of the United States of America, residing at Patoka, in the county of Marion and State of Illinois, have invented new and useful Improvements in Railway-Switches, of which the following is a specification.

This invention relates to railway switches, and one of the principal objects of the same is to provide simple and efficient means for simultaneously shifting the frog or rail section from one frog to another and for moving the switch points into proper position relatively to the movement of the frog or rail section.

Another object of the invention is to provide reliable and efficient mechanism for shifting the frog or rail section, locking the same in position and shifting the rail points all by the movement of a single lever.

Still another object of the invention is to provide simple, reliable and efficient means for shifting the rail section or frog, locking the same in shifted position, moving the switch points by two movements of a single lever, means being provided for locking said lever in two positions.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which,—

Figure 1 is a plan view of a switch made in accordance with our invention. Fig. 2 is a top plan view of the switch stand. Fig. 3 is a vertical section of the same, showing some of the parts of the switch-operating mechanism in section. Fig. 4 is a perspective view of a slotted lever adapted to actuate the frog-locking mechanism. Fig. 5 is a detail sectional view of the pivoted rail section or frog and the plate on which it is mounted. Fig. 6 is a detail sectional view of one end of said movable section or frog, showing the lever connection for operating the same.

Referring to the drawings, the numerals 1 designate the main track rails, and 2 are the side rails. Secured to the ties at the point of intersection of the side rails and one of the main track rails is a plate 3, said plate being provided with oppositely disposed slots 4. Pivotally mounted at 5 upon the plate 3 is a movable rail section or frog 6. The frog 6 is pivoted centrally to the plate 3 by means of a threaded screw 7 extending to the bottom of the plate 3 into a socket in

the lower side of the frog 6, and lock nuts 8 are applied to the end of the bolt, as shown in Fig. 5. At the opposite ends of the frog 6 levers 9 are pivotally connected to said frog by means of threaded pins 10, said pins extending through the slots 4 in the plate 3 and connected to the frog 6 on the underside thereof, the levers 9 being pivoted upon the pins 10 and held in place by means of pins 11, as shown in Fig. 5. The levers 9 extend underneath the outer track rails 1 and are pivotally connected to bell crank levers 12, said bell crank levers being pivoted at 13 to a bar 14 secured to the ties. A bar 15 is pivotally connected to each of the bell crank levers, and attached to the bar 15 is a connecting rod 16 pivoted to a bell crank lever 17, said lever being pivoted at 18 to a bar 19 supported on the ties near the switch stand. Suitable stops 20 are provided at the sides of the rails 1 and 2 to insure proper alignment of the frog 6 with the rails when shifted.

At the points of junction of the rails 1 and 2 bearing blocks 21 are secured, said bearing blocks each having a longitudinal opening therein through which projects a locking bar 22, said locking bars being longitudinally movable in the bearing blocks 21. Pivotally connected to the outer ends of the locking bars 22 are the levers 23, said levers being pivotally connected at 24 to bars 25 supported upon the ties. The levers 23 are pivoted at their outer ends to a connecting rod 26, said connecting rod extending through keepers 27 supported on the ties, and a spiral spring 28 surrounds the end of said connecting rod. The tension of the spring 28 is exerted to hold the connecting rod in position to lock the frog 6 in either of its adjusted positions. The connecting rod 26 is pivotally connected to an elbow lever 29 pivoted at 30 to one of the ties. Connected to the elbow lever 29 is a lever 31 adapted to be actuated by the movement of the lever at the switch stand, as will be hereinafter described.

The switch points 32 are pivotally connected to the bearing blocks 33, and near the ends of said switch points a cross bar 34 is connected, said cross bar extending from one switch point to the other and extending under one of the rails to form an extension 35. Pivotally connected to the extension 35 is a lever 36.

The switch stand comprises the legs 37

provided with feet 38 securely bolted to the ties 39, said legs being connected at the top by the table 40. Supported upon the table is a metal disk 41 having notches 42 and 43 5 formed therein. A curved slot 44 is formed in the disk 41 and in the table 40, said slots being coincidentally disposed in said disk and table. A shaft 45 is mounted to revolve in the disk 41 and the table 40, the lower end 10 of said shaft being mounted in a cross bar 46. A bar 47 is provided with a lug 48 having a hole therein through which the shaft 45 passes. This bar is pivoted at 49 to a lever 50, said lever being pivoted at 51 to a 15 slotted block 52 rigidly connected at 53 to the shaft 45. The lug 48 bears against a curved lever 54 pivoted at 55 on a lug 56 secured to the frame. The lever 54 is provided with a slot 57 in the curved upper portion thereof, and the shaft 45 extends through said slot. The opposite end of the lever is pivotally connected at 58 to the bar 31. Secured to the lower end of the shaft 45 is a projecting arm 59 adjustably secured 25 to the shaft 45 by means of a set screw 60. Pivotally connected to the arm 59 is a bar 61, the outer end of which is pivoted to the elbow lever 17, as shown in Fig. 1.

The operation of our invention may be 30 briefly described as follows: When the switch is in the position shown in Fig. 1 of the drawing and the main track is in operative condition, the lever 50 may be raised out of the notch 42 and moved to the left into 35 the notch 43. The initial movement of the lever 50 forces the lug 48 downward, and this actuates the lever 54 to draw the bar 31 inward and to withdraw the locking bars 22 into the bearing blocks 21. A further move- 40 ment of the lever 50 actuates the bar 61 and the connections for moving the switch points 32 and the frog 6 simultaneously, said frog being moved to a position to aline with the

siding track 2. In this condition a train may pass over the track 2 and on to the main 45 track 1, or a train going toward the right may be run from the main track on to the siding.

From the foregoing, it will be obvious that a switch made and operated in accord- 50 ance with our invention will be reliable in use, quick to operate, will be locked in its adjusted position and can be installed at low cost.

We claim:—

1. A switch comprising a plate secured to the ties at the point of junction of the siding and the main track, a frog pivotally mounted on said plate, locking bars mounted in bearings to lock said frog in adjusted position, a switch stand, switch points, and switch mechanism for moving the locking bars, shifting the frog and moving the points by the movement of a single lever, said switch mechanism comprising a curved 65 lever provided with a slot, connections extending to the points and an operating lever and lock.

2. A switch comprising a plate supported upon the ties, a frog pivoted to said plate, 70 bearing blocks for said frog, locking bars extending through said bearing blocks, levers connected to said locking bars, a switch stand, switch points, a lever, a lock for said lever, connections between said lever 75 and switch points, said connections comprising a pivoted two-armed lever having a curved and slotted upper end through which the operating lever extends.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE SHIMP.
ISAAC H. WILTON.

Witnesses:

JAY B. SACKETT,
G. W. GAULTNEY.