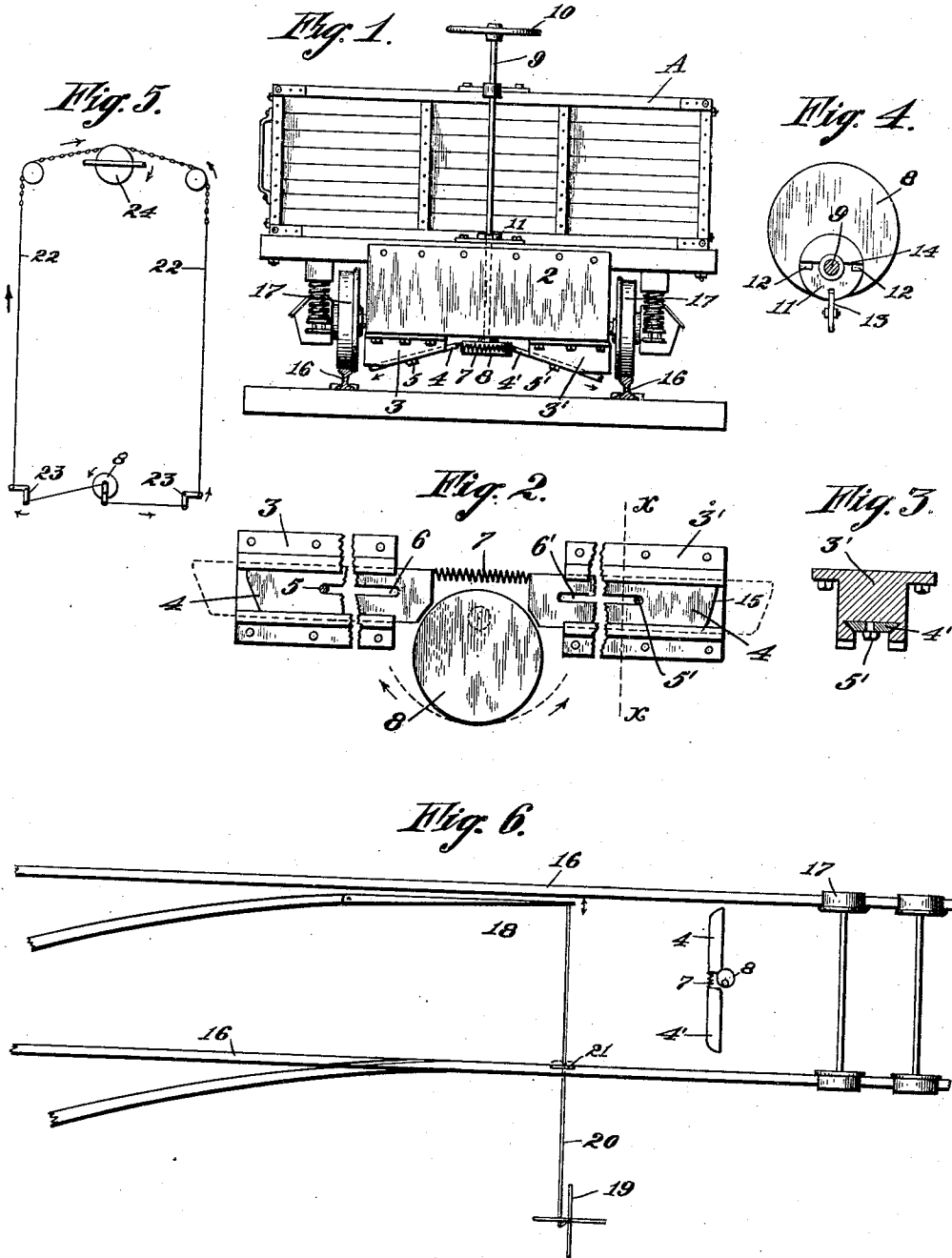


S. ORDÓÑEZ & L. KATZ.
 DEVICE TO TURN RAILWAY SWITCHES.
 APPLICATION FILED JULY 3, 1909.

938,889.

Patented Nov. 2, 1909.



WITNESSES;

R. S. Berry

F. E. Maynard

INVENTORS
 SALVADOR ORDÓÑEZ
 AND LOUIS KATZ
 BY *Geo. H. Strong*
 THEIR ATTORNEY.

UNITED STATES PATENT OFFICE.

SALVADOR ORDÓÑEZ AND LOUIS KATZ, OF SAN FRANCISCO, CALIFORNIA.

DEVICE TO TURN RAILWAY-SWITCHES.

938,889.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed July 3, 1909. Serial No. 505,907.

To all whom it may concern:

Be it known that we, SALVADOR ORDÓÑEZ, a citizen of Ecuador, and LOUIS KATZ, a citizen of the United States, both residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Devices to Turn Railway-Switches, of which the following is a specification.

This invention relates to a device for throwing switches on railways.

It is the object of this invention to provide a switch-throwing device by means of which a switch may be thrown or turned by a moving train, engine, car, or the like.

A further object is to provide a switch-throwing device that can be readily attached to a car, and be operated therefrom, thus dispensing with an attendant at the switch. By applying this invention, it is not necessary to stop a car or send a switchman ahead to throw a switch, as the operation can be readily performed from the moving car, thus saving time and labor in the handling of rolling-stock.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a front elevation of the invention as applied to the end of a car. Fig. 2 is an inverted plan view. Fig. 3 is a section on the line X—X, Fig. 2. Fig. 4 is a detail of the locking device. Fig. 5 is a diagram showing the method of operating the invention from a distance. Fig. 6 is a plan view illustrating the manner of throwing a switch.

In the drawings, A represents a car, on either one or both ends of which is secured a downwardly projecting frame or apron 2 which may be of any desired or suitable construction. This frame has guide plates 3—3' secured to its under side, the plates being provided with a channel or groove in which plates 4—4' are slidably mounted. Pins 5—5' on the plates 3—3' engage slots 6—6' in the plates 4—4' to limit the movement of the latter.

A spring 7 connects the inner ends of the plates 4—4' and normally tends to retain them in their innermost position. A cam disk 8 mounted on the lower end of a vertical shaft 9 is interposed between the inner ends of the sliding plates 4—4' in such manner that as the cam 8 is moved to either side,

the plate on that side will be shoved forward, as indicated by the dotted lines in Fig. 2. The shaft 9 is provided with a handle 10 by which it may be rotated. In order to limit the movement of the cam 8, a disk 11 is secured to the shaft 9, and has slots or pockets 12 in which a pawl 13 normally drops, thus locking the shaft in any one of three positions. A shoulder 14 on the disk 11 prevents the shaft 9 from being rotated entirely around.

The plates 4—4' are slightly inclined and have their lower or outer ends normally terminating close to the inner side of the rails 16, at a point ahead of the wheels 17, so that when they are moved forward and downward by the cam 8 they will nearly contact with the rail in such manner that when an open switch is encountered, the plates 4—4' will force the split rail 18 against the main rail so that the wheels 17 will follow the switch. The lower ends of the plates 4—4' are slightly tapered, as at 15, so as to present an inclined surface at the point of contact with the split rail.

In operation, it being desired to send a car or train off from the main line to a siding, and the switch being open for straight ahead, as shown in Fig. 6, the operator forces the plate 4 down so that it will strike the split rail 18, by rotating the cam 8 a quarter of a revolution to the left; it being understood that as the car is moving straight ahead the cam 8 is in its normal position, shown in Fig. 4. The pawl 13, being released, allows the cam to be rotated until the plate 4 is in its most outward position, whereupon the pawl 13 drops into a slot 12 and holds the cam stationary. The plate 4 on striking the split rail 18 shoves it against the main rail, so that the car passes on to the siding.

It will be seen that by thrusting the plate 4 outward, it will throw a switch so that the train or car will go to the left, while the plate 4' acts to throw a switch turning to the right.

The split rail 18 may be connected with a signal 19 by a rod 20 in any suitable manner, so as to indicate the position of the switch. A projection 21 is formed on the rod 20 in such manner that it will be acted upon by the plate 4' so as to open the split rail 18.

If desired, the switch-throwing device can be operated from a distance, as from the

rear end of the car on which it is attached, as shown in the diagram, Fig. 5. In this case, the shaft 9 is connected by a system of rods or chains 22 and bell-cranks 23 to a drum 24, so that by turning the drum the cam 8 can be turned as before described.

Having thus described our invention, what we claim and desire to secure by Letters-Patent, is:

10 1. The combination in a railway switch changing device, of guided transversely slidable plates, the outer ends of which are adapted to contact with the rails to be moved, springs by which said plates are normally retained in a central position, a turnable cam located between the inner ends of the plates, and means to turn said cam.

20 2. The combination in a railway switch changing device, of guided transversely slidable plates, the outer ends of which are adapted to contact with the rail points to be moved, means to retain the plates normally in a central position, a cam, and means to turn it so as to move either of the plates, and locking means to limit the movement of the cam.

25 3. The combination in a railway switch changing device, of a frame or support car-

ried upon a car, inclined guides fixed there- to, slides movable transversely in the guides, and capable of being simultaneously re- 30 tracted and raised, a cam contacting with the inner ends of the slides, means to turn the cam to advance either of the slides to contact with and move the switch rail points, 35 a slotted disk and a latch to engage therewith and lock the parts in either position.

4. The combination in a railway switch changing device, of inclined guides carried upon a car, slides movable transversely in the guides, means by which said slides are 40 normally retracted and raised, a turnable cam engaging the slides to advance either into contact with the switch rail point, a slotted disk and a latch to engage and hold 45 the disk and slides at either point of adjustment, and a shoulder or stop to limit the movement of the cam in either direction.

In testimony whereof we have hereunto set our hands in the presence of two sub- 50 scribing witnesses.

SALVADOR ORDÓÑEZ.
LOUIS KATZ.

Witnesses:

JOSEPH SLYE,
CHAS. W. KITTS.