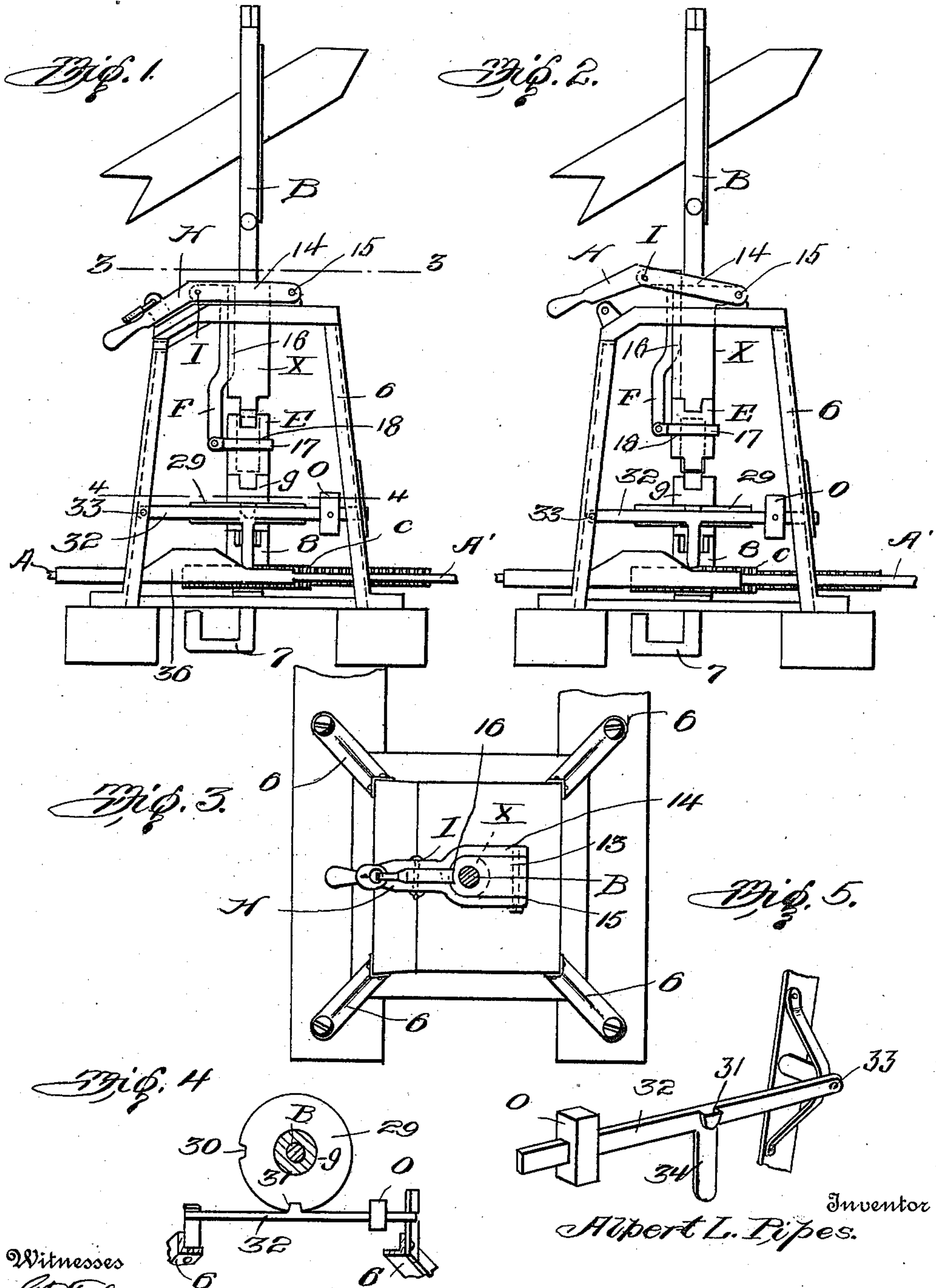


A. L. PIPES.
 SWITCH STAND FOR RAILWAYS.
 APPLICATION FILED APR. 30, 1910.

976,210.

Patented Nov. 22, 1910.



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UNITED STATES PATENT OFFICE.

ALBERT L. PIPES, OF PRYOR, OKLAHOMA.

SWITCH-STAND FOR RAILWAYS.

976,210.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed April 30, 1910. Serial No. 558,729.

To all whom it may concern:

Be it known that I, ALBERT L. PIPES, a citizen of the United States, residing at Pryor, in the county of Mayes and State of Oklahoma, have invented certain new and useful Improvements in Switch-Stands for Railways, of which the following is a specification.

This invention relates to switch stands for railways, and is designed particularly for use in connection with a switch adapted to be thrown either by a trip on the engine, or by hand, such for example as disclosed in my allowed application No. 512,317 filed Aug. 11, 1909.

The object of the invention is to simplify and improve the construction of the stand, particularly with respect to the means for throwing the hand operated devices in or out of action.

In the accompanying drawings, Figure 1 is a side elevation of the stand in one position. Fig. 2 is a similar elevation in another position. Fig. 3 is a section on the line 3—3 of Fig. 1, looking down. Fig. 4 is a detail in section on line 4—4 of Fig. 1. Fig. 5 is a detail of a latch member.

The frame 6 of the stand may be of any desired or suitable construction to support the parts hereinafter mentioned. It supports the main switch post or shaft B, which has a crank 7 at the lower end which will be connected to the switch rod in the usual manner, the shaft being mounted to turn in suitable bearings in the top and bottom plates of the frame. Mounted upon the shaft is a pinion C, which is integral with or fastened to a clutch member 8, and this pinion and clutch member are loose on the shaft; that is, they are located on a round portion of the shaft, to turn freely thereon. The pinion C is engaged by racks on right and left shifting rods A and A' which will be extended to suitable tripping mechanism (not shown) for operation by a trip carried by the engine.

Mounted to turn freely on the shaft, above the clutch member 8 is a double clutch member 9, provided with a peripheral flange 29 notched as at 30 to receive a projection 31 (see Fig. 4) on a latch lever 32 which is pivoted at 33 to the stand and provided with a weight O which causes it to normally engage the projection in the notch and hold the clutch member against movement except when the latch is lifted. The latch lever 32

has a depending arm 34 which rests upon the upper edge of the rack bar A, which has a cam 36 inclined at opposite ends and forming a wedge which, when the bar is shifted lengthwise in either direction with sufficient force will act to lift the latch and release the clutch member 9, this construction and operation being the same as that described and claimed in my allowed application above referred to.

Above the clutch member 9, the main shaft B is squared and on said squared part is mounted a double clutch member E, which is shiftable up and down on the shaft. The clutch member E is the active member, and when it is actuated the shaft B is turned accordingly.

On a round part of the shaft, above the clutch member E, is a clutch member X, which turns in a suitable opening in the top plate of the frame, and above said plate it has a projecting part 13 which holds it in position and also forms the means for the attachment of a yoke lever 14 having a handle H, a pivotal connection being formed by a bolt at 15. The branches 14 of the yoke lever embrace the head of the clutch member X on opposite sides thereof. The handle H is connected to the clutch member E by means of a bent rod or bar F which is pivoted at I, at its upper end, between the branches of the yoke lever, and is bent to extend downwardly through a groove 16 in the clutch member X, which clutch as stated is free to turn in the top plate of the switch frame. The lower end of the bar F is connected to the clutch member E by means of a ring 17 extending around in a groove 18 in said clutch member, whereby said clutch member E is free to turn in said ring. The handle H may be fastened by a lock in the usual manner.

In the operation of the device, the handle lever H will ordinarily be swung down and locked, and the clutch member E will be dropped out of engagement with the clutch X, and in engagement with the clutch member 9, which is always in engagement with the clutch member 8. In this position, when either bar A or A' is moved lengthwise by the trip mechanism, the pinion C will be turned, thereby lifting lever 32 and unlocking the switch and turning the clutch members 8 and 9 and also the clutch member E, and inasmuch as the latter is on a squared part of the shaft B, said shaft will be turned

and the switch will be thrown accordingly. In this operation the clutch member X does not move.

When the switch is to be operated by hand, the lever H is swung up as shown in Fig. 2. By means of the connecting piece F this lifts the clutch member E, disengages the same from the clutch member 9, and engages the same with the clutch member X. Then, the handle is swung around, turning the clutch member X in the switch stand, and also turning the member E and the shaft B, and consequently throwing the switch, the members 8 and 9 remaining inactive, since, as stated, the shaft B will turn freely therein.

What I claim as new is:—

1. The combination with an upright switch shaft, of separate automatic and manual operating devices, and connections between said devices and the shaft including a clutch member located on the shaft and connected to said manual devices and shiftable thereby up and down on the shaft to engage either of said devices and disengage the other.

2. The combination with a switch shaft, of clutch members loose thereon, an intermediate clutch member non-rotatable on said shaft and shiftable lengthwise thereon from one of said clutch members to the other, a hand lever connected to one of said loose clutch members, automatic devices connected to the other, and a connection between the hand lever and the intermediate clutch member to shift the same from one of said clutch members to the other.

3. The combination with a switch stand frame and an upright switch shaft therein, of upper and lower clutch members mounted to turn in said frame and on said shaft,

automatic devices operatively connected to the lower member, a hand lever pivoted to the upper member to swing up and down, an intermediate clutch member non-rotatable on the shaft, and shiftable up and down thereon to engage with either of said upper or lower members, and a bar connecting the hand lever and said intermediate member, to lift the latter to engagement with the upper clutch member, when the hand lever is swung up.

4. The combination with a switch stand frame and an upright switch shaft therein, of a clutch member mounted to turn in the frame and loose on the shaft, a clutch member non-rotatable on the shaft and shiftable thereon to engagement or disengagement with said clutch member, and a hand lever pivoted to and adapted to turn the loose clutch member and connected to the other clutch member to shift the same.

5. The combination with a switch stand frame, and an upright switch shaft therein, of an upper clutch member mounted loosely on the shaft and arranged to turn in an opening in the top of said frame and having a longitudinal groove, a lower clutch member non-rotatable on the shaft and shiftable up and down thereon to engagement or disengagement with the upper clutch member, a hand lever pivotally connected to said upper clutch member above the top plate of the frame, and a bar connecting said lever and the lower clutch member and extending through said groove.

In testimony whereof I affix my signature, in presence of two witnesses.

ALBERT L. PIPES.

Witnesses:

P. AVERY,
PARK AVERY.