

L. C. P. TAENCHEN.

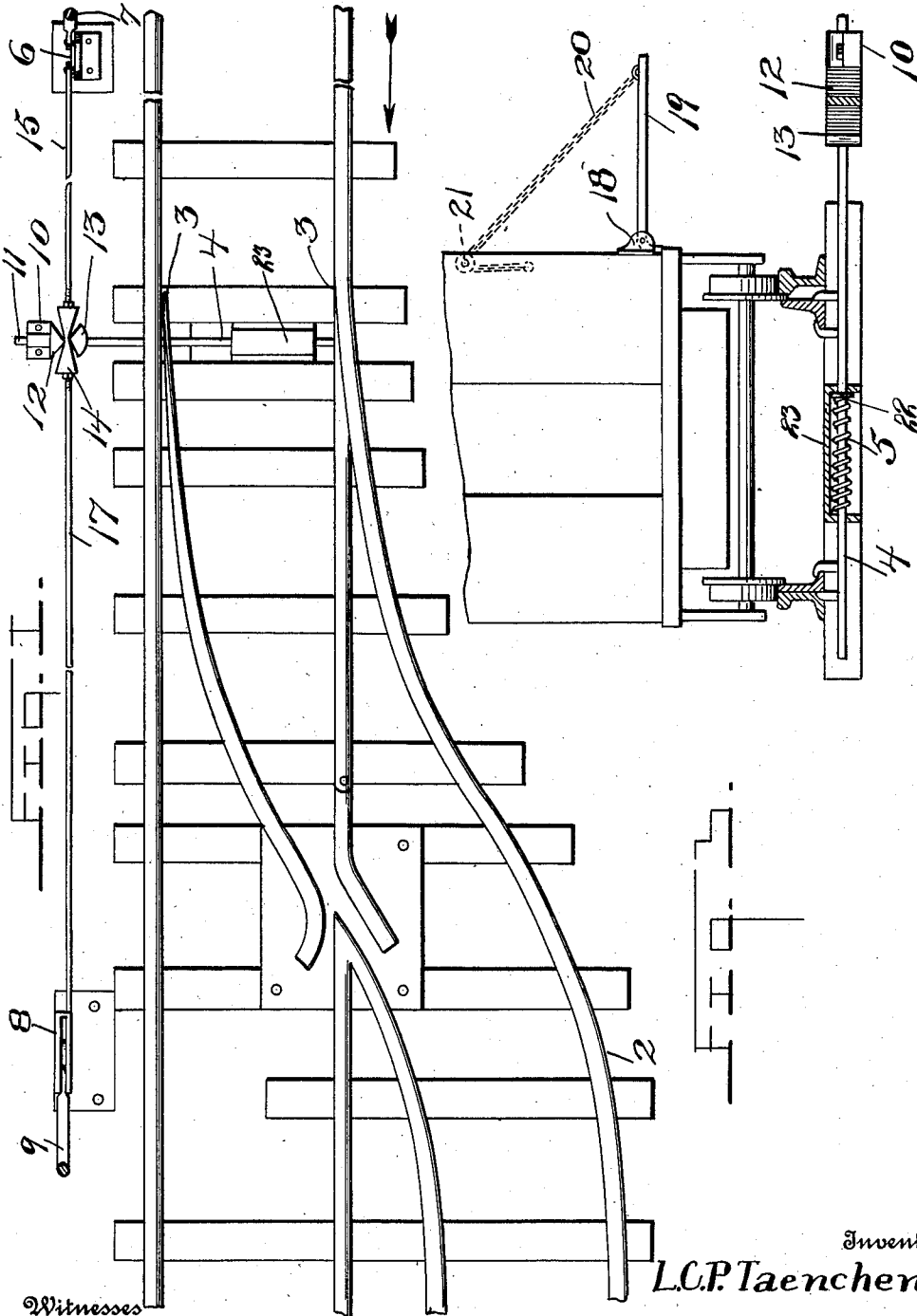
RAILROAD SWITCH.

APPLICATION FILED AUG. 25, 1910.

Patented Mar. 26, 1912.

2 SHEETS—SHEET 1.

1,021,644.



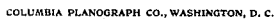
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1,021,644.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

LUDWIG C. P. TAENCHEN, OF IVANHOE, COLORADO.

RAILROAD-SWITCH.

1,021,644.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed August 25, 1910. Serial No. 578,854.

To all whom it may concern:

Be it known that I, LUDWIG C. P. TAENCHEN, a citizen of the United States, residing at Ivanhoe, in the county of Pitkin and State of Colorado, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

This invention relates to railway switches, and more particularly to those which are adapted to be operated from the moving locomotive or train, thereby dispensing with the attendant ordinarily employed at switches to perform this laborious and important duty.

The object of the invention is to provide an extremely practical and effective device of the character described, whereby upwardly projecting pivoted levers are adapted to be operated upon by a suitable outwardly projecting arm which is hingedly attached to the locomotive or car comprising the train. By this means should it be desired to make a siding for the passage of another train in either direction along the main line the switch may be readily and conveniently operated from the cab of the locomotive, the rear end of the frame also being provided with suitable means for throwing the switch back to its normal position after said train has passed over the switch and practically within the siding desired to be made.

With these and other objects in view, the present invention consists in the combination and arrangement of parts which will be hereinafter more fully described and particularly pointed out in the appended claims.

In the drawings: Figure 1 is a top plan view of the switch constructed according to the invention. Fig. 2 is a side elevation of the same showing the switch in its normal position, and further showing a portion of the cab of the locomotive with the movable striker arm attached thereto. Fig. 3 is a plan view of the rear end of a car, showing the striker arm in a lowered position with the switching device in section. Fig. 4 is a detail vertical section of a portion of a cab showing the striker arm attached thereto and the means for holding and operating the same. Fig. 5 is a perspective view of the means employed for operating the switch bar which connects the switch points.

Referring to the drawings, 1 represents the usual railroad consisting of the ordinary ties and rails forming the road bed, and a siding 2 having the ordinary switch points 3 adapted for contact with the rails of the main line. The switch points 3 of the rails 2 comprising the siding are connected together by a transverse bar 4, one of said points being normally held out of contact with one of the tracks of the main line and frogs thereof by the springs 5 having one end bearing against the casing 23 and the other against the abutment 22 on the bar 4. Located at a suitable distance from the transverse connecting bar 4 to one side of the track 1 is a support 6 to the upper end of which is movably mounted a throw lever 7, the end of which projects a suitable distance above the tracks to be in a convenient position to be operated upon in a manner to be hereinafter described. Also secured at a suitable distance from the opposite side of the switch actuating mechanism and transverse bar forming a part thereof, is a segmental guide support 8, to the lower portion of which is movably secured the lower end of a lever 9, the upper end of which also projects a suitable distance above the track to be operated upon in a like manner by the striker arm carried by the train, for reversing the switch mechanism.

Securely fixed to the road bed and to one side of the track 1, is a bearing 10 through which the rounded projecting end 11 of the connecting bar 4 is adapted to freely slide, the said bearing having an enlarged wedge shaped head portion 12, and rigidly secured to the said transverse connecting bar 4 is a wedge shaped block 13, which is adapted to be moved to and from the wedge shaped head 12 of the bearing 10 by the double wedge shaped bar 14 which is located between the head and block referred to.

Hingedly secured to the lower projecting end of the throw lever 7 is one end of a rod 15, the opposite end of said rod being screw threaded and adjustably secured within a screw threaded socket formed in one end of the double wedge shaped bar 14, a nut being employed which is adapted to be bindingly brought in contact with that end of the bar for holding the rod 15 in an adjusted position with respect to the remaining parts. The opposite end of the double wedge shaped bar 14 is likewise secured to one end of a rod 17, the opposite

end of said rod being hingedly attached to the throw lever 9 at a suitable distance above its movable connection, whereby it would be observed that when the switch is in its normal position, the two throw levers 7 and 9 will be inclined in opposite directions, with the medial reduced portion of the bar 14 in contact with the similar portions of the wedge shaped head and block 13 respectively.

Fixed to one side of the cab of the locomotive is a bracket 18, and movably secured to the same is one end of a striker arm 19 which when in its lowest position projects substantially in a horizontal position to come in contact with the throw levers 7 and 9, the said striker arm being operated and supported by a suitable chain 20 one end of which is attached to the free end of the striker arm, and passing over a roller 21 mounted in a suitable opening formed in the cab, whereby the opposite or free end of said chain is in a position within the cab to be readily grasped by the operator for raising or lowering the striker arm.

From the foregoing description it will be observed that when the main line is clear and the throw levers 7 and 9 are in their normal position or that shown in Fig. 2, and it is desired to make the siding, the striker arm 19 attached to the cab of the locomotive is dropped in a horizontal position, whereby as the locomotive advances and before the same reaches the switch the throw lever 7 will be operated upon and moved in a reverse position which will simultaneously throw the lever 9 also in a reverse position to that shown. By actuating the throw lever 7 in a manner described the double wedge shaped bar 14 is moved in the direction as shown by the arrow in Fig. 2, in which operation the flat inclined surfaces of the head 12 and block 13 will be frictionally engaged causing the connecting bar 4 to be moved in the direction as shown by the arrow in Fig. 1, thus bringing one of the switch points 3 in contact with one of the rails forming the siding 2. The rear or

observation car, or any other one comprising the end of the train is likewise provided with a striker arm and operating chain, whereby the switch and parts comprising the same are again moved to their normal positions by coöperation with the lever 9 which was previously moved in the opposite direction, thus closing the main line after the train has completely passed into the siding.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is:

1. The combination with the connecting bar of a normally open spring switch, of a bearing therefor having an inwardly projecting wedge shaped member, a second wedge shaped member secured on the connecting bar, and a double wedge member slidably engaged between the wedge of the bearing and the wedge member secured on the connecting bar, whereby reciprocal movement of the double wedge member will force the bar and bearing wedge member apart to shift the switch.

2. The combination with the connecting bar of a spring switch, of a wedge member secured on said bar, a rod slidably supported at the side of the track, a wedge member secured on said rod and having its smaller portion normally in engagement with the wedge member of the switch bar, and trip operated levers for shifting the rod, whereby as the rod is shifted the wedge member thereof will be reciprocally moved and will cam the wedge member of the connecting bar inward to shift the spring switch.

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

LUDWIG C. P. TAENCHEN.

Witnesses:

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