

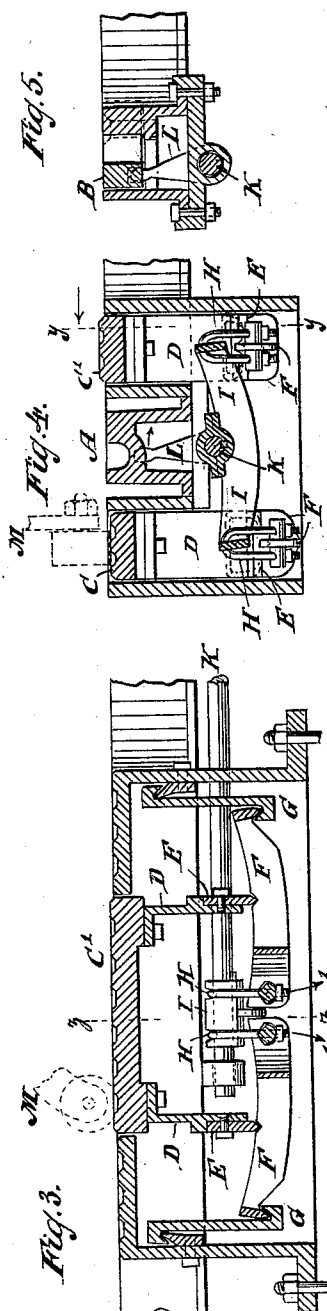
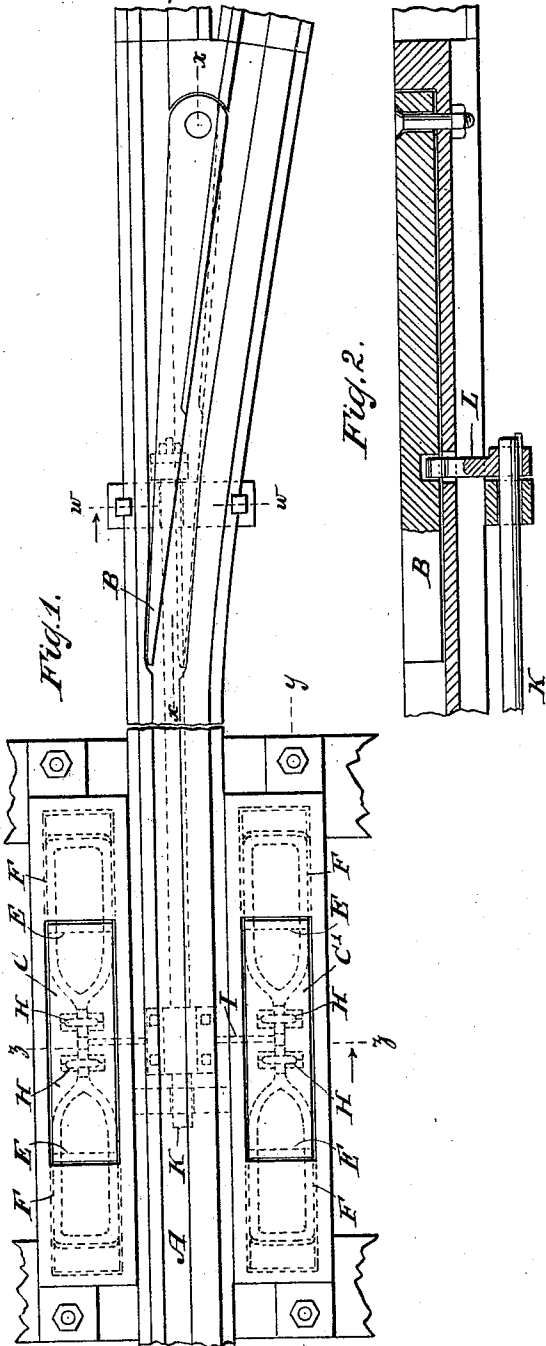
(No Model.)

2 Sheets—Sheet 1.

L. N. JÄGEL, C. G. SMITH & A. B. PRUDEN.  
RAILROAD SWITCH.

No. 521,716.

Patented June 19, 1894.



WITNESSES:

*E. Wolff.*  
*Chas. E. Doeringer.*

INVENTORS:

*Abraham B. Pruden.*  
*Louis N. Jägel.*  
*Charles G. Smith.*

BY *Kauff & Hauff*  
their ATTORNEYS.

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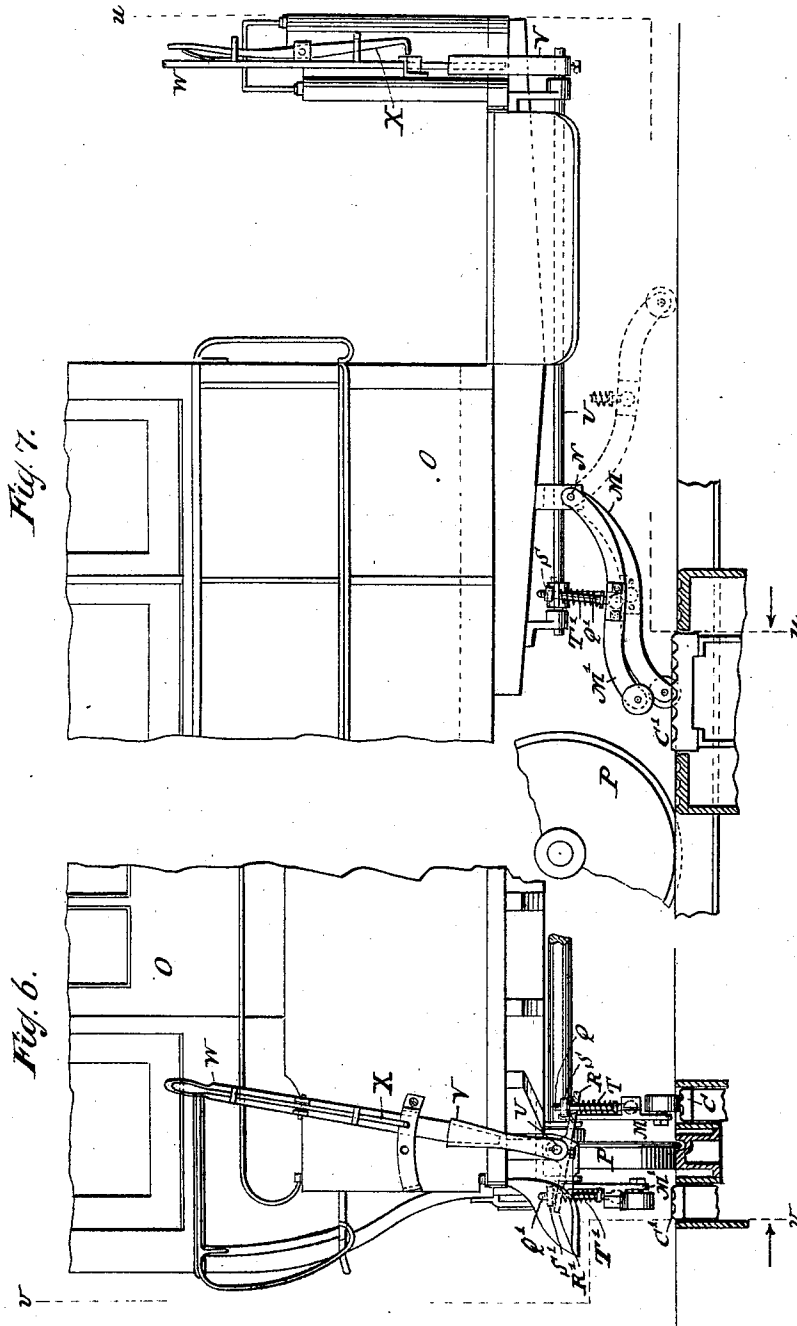


Fig. 7.

Fig. 6.

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*E. Wolff*  
*Chas. C. Paeniger*

INVENTORS:

*Abraham B. Pruden*  
*Louis F. Jägel*  
*Charles G. Smith*

BY *Hauff & Hauff*  
Attorneys.

# UNITED STATES PATENT OFFICE.

LOUIS N. JÄGEL, OF CLARENCEVILLE, AND CHARLES G. SMITH AND ABRAHAM B. PRUDEN, OF BROOKLYN, NEW YORK.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 521,716, dated June 19, 1894.

Application filed March 9, 1894. Serial No. 503,055. (No model.)

To all whom it may concern:

Be it known that we, LOUIS N. JÄGEL, of Clarenceville, and CHARLES G. SMITH and ABRAHAM B. PRUDEN, of Brooklyn, county of Kings, State of New York, citizens of the United States, have invented new and useful Improvements in Railroad-Switches, of which the following is a specification.

This invention relates to an improvement in railroad switches and the invention consists in the details of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the switch. Fig. 2 is a section along *x x* Fig. 1. Fig. 3 is a section along *y y* Figs. 1 and 4. Fig. 4 is a section along *z z* Figs. 1 and 3. Fig. 5 is a section along *w w* Fig. 1. Fig. 6 is a section along *u u* Fig. 7. Fig. 7 is a side elevation of mechanism for operating the switch sectioned along *v v* Fig. 6.

The rail A has a switch tongue B. The plates C and C' are each provided with legs which are made of two suitably connected parts D E. Each leg D E is shown with a knife edge resting on a lever or arm F. Each of the levers F is shown fulcrumed on a suitable support or hanger G applied at any suitable point of the structure. Each lever is connected by a link or connection H to a lever I secured or keyed to a rock shaft K of indefinite length carrying an arm L. Said arm L engages the switch B. If the plate C' is depressed the levers F at one end of lever I will be actuated as indicated by arrows 1 (Fig. 3) so as to swing lever I to rock shaft K and cause the arm L to move switch tongue B to the position indicated in Fig. 1 by dotted lines. If the plate C is depressed the levers F at the opposite arm of lever I will be actuated so that the switch tongue is moved to the position indicated in Fig. 1 by full lines. By having a lever F arranged as shown for each leg D E of a plate C or C', each lever pair F F will be properly actuated to move lever I no matter whether the plate is moved by pressure applied at or near an end of the plate or centrally thereto. A plate C or C' can be actuated by a roller or contact device at the free end of arm M or M' both fulcrumed at N to a body O of a car or con-

veyance running on wheels P. To the arms M M' are jointed respectively links Q Q' extending through eyes in the arms R R' which latter are prevented from passing out of engagement with links Q Q' by nuts S S' on said links. When an arm R or R' is swung toward an arm M or M' said arm R or R' will press on spring T or T' coiled about link Q or Q' so as to hold arm M or M' with a yielding pressure toward or in contact with plate C or C'. The arms R R' are keyed or fixed to shaft U having a lever or arm V which can be operated by handle W. By throwing handle W one way or another the shaft U, arms R R' and M M' can be actuated to shift or set the switch. By having the shaft U extend back and the arms M M' located some distance from the front edge of the car, the said front edge is left free for the attachment of a fender or other device. The handle W can be conveniently placed at or near the dashboard, so as to be accessible, and provided with a catch or stop X. The arms M M' can be made to extend from the fulcrum N backward as seen in full lines in Fig. 7, or from the fulcrum forward as seen in dotted lines in Fig. 7.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a depressible plate, and a switch-tongue, of a rock-shaft journaled beneath the depressible plate and switch-tongue and having a rigid arm engaging the latter, a lever pair supporting the depressible plate, and connections between the lever pair and the said rock-shaft, substantially as described.

2. The combination with depressible plates, and a switch tongue, of a rock-shaft journaled beneath the depressible plate and switch tongue and having a rigid arm engaging the latter, a lever secured intermediate its ends to the rock-shaft, and pivotally mounted levers supporting the depressible plate and connected with the opposite ends of the rock shaft lever, substantially as described.

3. A switch and an arm for actuating the switch, combined with a lever pair connected to the arm, independent hangers or supports each made to form a fulcrum for a lever of the pair, a leg resting on each lever of the

pair, and a plate supported by the legs substantially as described.

4. The combination with a depressible plate, and a switch-tongue, of a rock-shaft journaled beneath the depressible plate and switch-tongue and having a rigid arm engaging the latter, levers pivotally supported at one end and connected at the other end with the rock-shaft by intermediate connections, and supports between the depressible plates and the levers, substantially as described.

5. The combination with depressible plates C and C', and a switch-tongue D, of a rock-shaft K journaled beneath the depressible plates and switch-tongue and having a rigid arm L engaging the latter, a lever I secured

intermediate its ends to the rock-shaft, the levers F pivotally supported at one end and having their opposite end connected with the ends of the rock-shaft lever, and legs D secured to the depressible plates and bearing against the said levers F intermediate their ends, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

LOUIS N. JÄGEL.  
CHARLES G. SMITH.  
ABRAHAM B. PRUDEN.

Witnesses:

WM. C. HAUFF,  
E. F. KASTENHUBER.