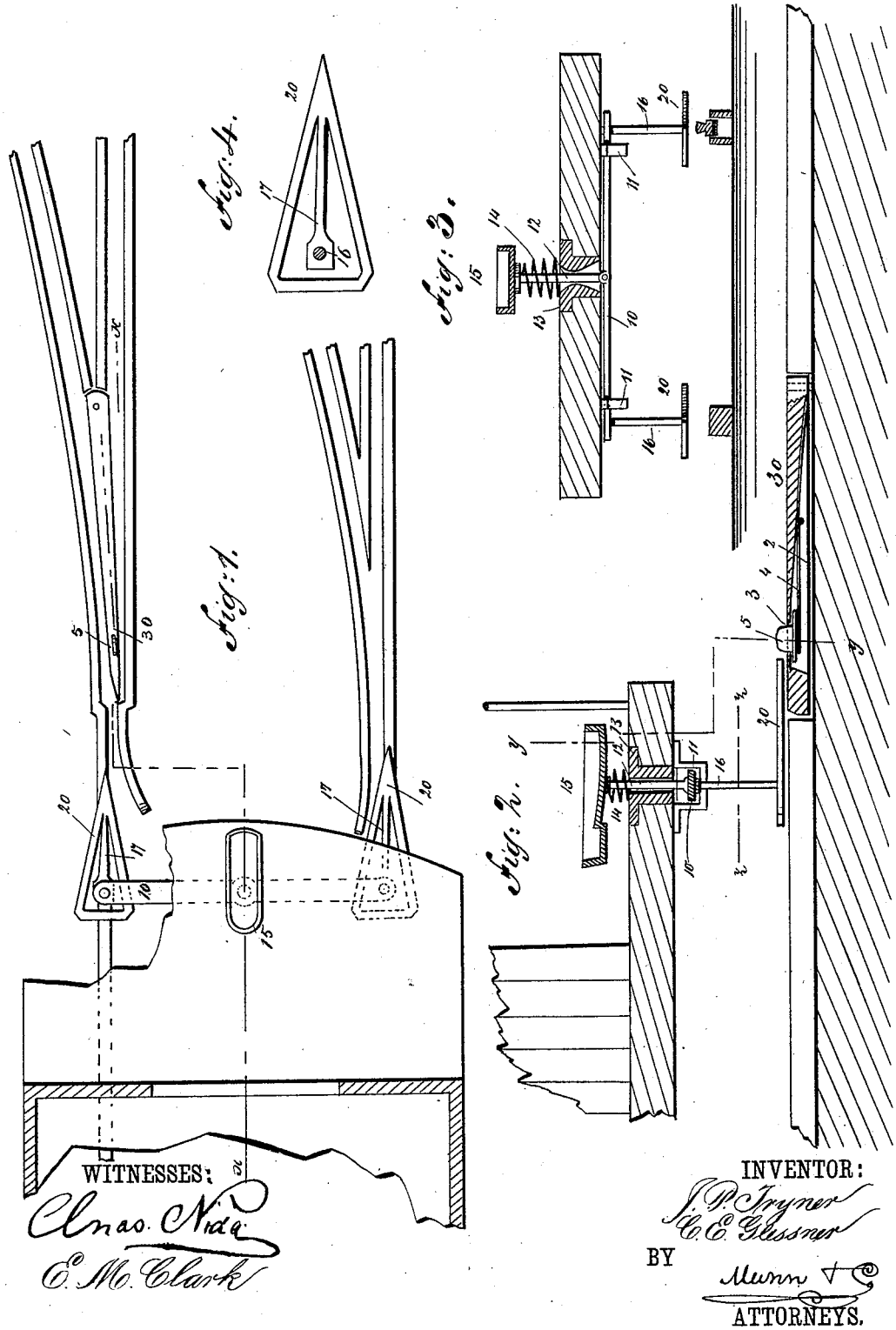
(No Model.)

J. P. TRYNER & C. E. GLESSNER.

SWITCH OPERATING ATTACHMENT.

No. 389,947. Patented Sept. 25, 1888.



WITNESSES:
Chas. Nida
E. M. Clark

INVENTOR:
J. P. Tryner
C. E. Glessner
BY
Munn & Co.
ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES P. TRYNER AND CHARLES E. GLESSNER, OF DENVER, COLORADO.

SWITCH-OPERATING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 389,947, dated September 25, 1888.

Application filed July 21, 1887. Serial No. 244,883. (No model.)

To all whom it may concern:

Be it known that we, JAMES P. TRYNER and CHARLES E. GLESSNER, of Denver, in the county of Arapahoe and State of Colorado, have invented a new and Improved Switch-Operating Attachment, of which the following is a full, clear, and exact description.

The object of this invention is to provide an attachment for cars or locomotives, whereby a switch-tongue may be thrown, as may be desired, by the driver or engineer, the invention consisting of a bar, a means for moving the bar toward the track and in a direction transverse to the track, shoes being connected to the ends of the bar in a position to engage with a projection which extends upward from the switch-tongue, all as will be hereinafter more fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a section of a track and of a portion of a street-car arranged to embody our invention, a portion of the car-platform being broken away to disclose the parts beneath said platform. Fig. 2 is a sectional view taken on line *x x* of Fig. 1. Fig. 3 is a sectional view taken on line *y y* of Fig. 2, except that the platform-socket is shown in section; and Fig. 4 is a view of one of the shoes, the view being taken on line *z z* of Fig. 2.

In the drawings above referred to, 10 represents a cross-bar, that is guided by two stirrups, 11, that are secured to the under side of the car-platform; or, in case of a locomotive, this bar would be secured in advance of the pilots. To the center of the bar 10 there is hinged an upwardly-extending post, 12, which passes through a doubly-flaring socket, 13, that is fitted within the platform-timbers, and about this post there is coiled a spring, 14, which normally acts to hold the bar 10 in the position in which it is shown in Fig. 3, the upper end of the spiral spring abutting against a treadle, 15, that is carried by the post 12.

To each end of the bar 10 we connect a post, 16, which posts in turn are connected to shoes 20 by means of spring-tongues 17, the shoes being in the form of skeleton isosceles triangles, the tongue 17 extending backward from the apices of the triangles toward the bases thereof.

The switch-tongue 30, in connection with which the apparatus above described is to be employed, is formed with a recess, 2, and an aperture, 3, as shown in Fig. 2, and in the recess so formed there is mounted a spring, 4, which bears against the under face of a block, 5, which block extends upward through the aperture 3.

From the construction described it will be seen that the shoes 20 are normally held above the track, but that by pressing the treadle 15 downward the bar 10, and with it the shoes 20, will be moved toward the track; and it will also be seen that by tilting the post 12 to the right or to the left the point of the shoe will be carried to one side or the other of the block 5, which block, as before stated, extends upward above the face of the switch-tongue, this arrangement being adopted in order that the driver may turn the switch-tongue to such position as may be required to guide the car upon the desired track.

It will of course be understood that any proper means could be employed for raising and lowering the shoes or for shifting them from side to side.

By establishing the connection with the shoes 20 through the medium of spring-tongues we provide for lateral yielding of the bearing-faces of the shoes, so that they will be able to pass the switch-tongue after it has been thrown home in the desired direction, this lateral yielding of the shoes being necessary, owing to the oscillation of the car.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of an apertured switch-tongue and a spring-pressed block projecting into the aperture of the said switch-tongue, substantially as described.

2. The combination of a vertically and laterally mounted bar, shoes connected to the end of the bar and a spring-actuated post pivoted to said bar, substantially as described, whereby provision is made for automatically raising the shoes above the track and holding them raised when not in use, as set forth.

3. The combination, with a bar, of a post hinged thereto and extending upward therefrom, a spring arranged in connection with the post, downwardly-extending posts 16, and shoes carried by said posts, substantially as described.

4. The combination, with a horizontal bar, of a vertical post hinged thereto, a socket through which the vertical post extends, a spring and treadle arranged in connection with the post, two downwardly-extending posts, and shoes carried by said posts, connection between the shoes and the posts being established by means of a spring-tongue, substantially as described.

5. A switch-operating shoe consisting of a triangular open frame provided with a spring-tongue extending from the apex toward the base, substantially as herein shown and described.

JAMES P. TRYNER.
CHARLES E. GLESSNER.

Witnesses:
C. E. FORD,
S. V. FARNUM.