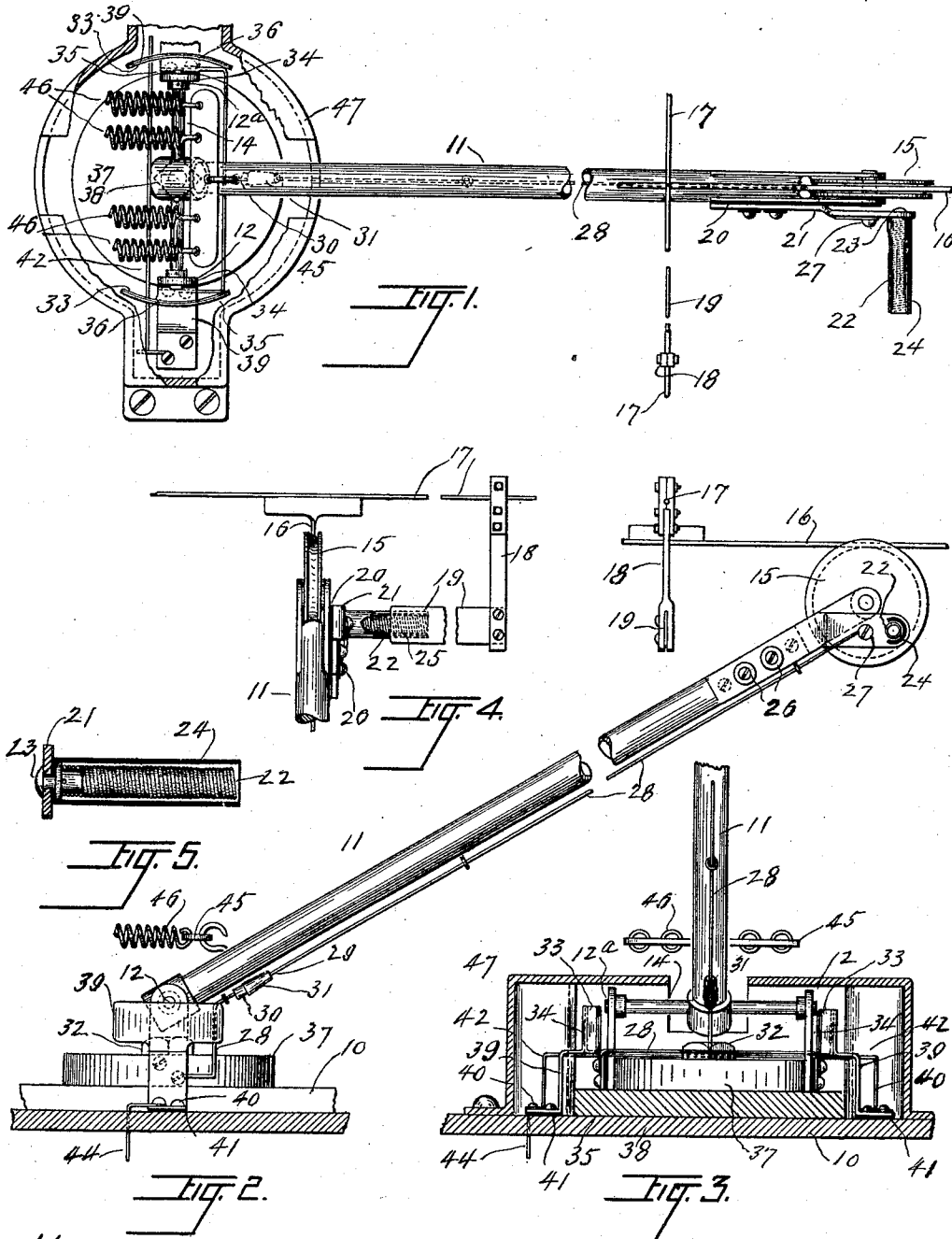


P. T. SPINDLER.
 OPERATING DEVICE FOR STREET INDICATORS.
 APPLICATION FILED JULY 3, 1911.

1,029,770.

Patented June 18, 1912.



WITNESSES:

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UNITED STATES PATENT OFFICE.

PERRY T. SPINDLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO AMERICAN STREET AND STATION INDICATOR COMPANY, OF CHICAGO, ILLINOIS, A PARTNERSHIP.

OPERATING DEVICE FOR STREET-INDICATORS.

1,029,770.

Specification of Letters Patent.

Patented June 18, 1912.

Application filed July 3, 1911. Serial No. 636,761.

To all whom it may concern:

Be it known that I, PERRY T. SPINDLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Operating Devices for Street-Indicators, of which the following is a specification.

This invention relates to improvements in operating devices for street indicators.

It has for its object to provide a light and durable device for use in combination with a trolley pole; to economize in weight at the free end of a trolley pole, and to produce a contact between two flexible members and thereby eliminate the shock to a great degree, that is found in many other devices used for similar purposes, and to provide a suitable switch and connections for shunting power to a street indicator, as set forth in the following specification.

Referring to the drawings:—Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is an elevation of the base, parts of the device being shown in section. Fig. 4 is a front elevation of parts of the device forming elements of the invention. Fig. 5 is a detail of an element of the invention.

Similar numerals refer to similar parts throughout the drawings.

Referring specifically thereto, 10 indicates a portion of the top or roof of an ordinary trolley car, carrying a pole 11; the latter being provided with bearings at 12 and 12^a respectively for its horizontal pivot or axis 14.

15 is a trolley wheel and 16 is a trolley wire supported by the guy wire 17 in the usual manner. A hanger 18 is rigidly suspended from wire 17 and carries a thin, flexible member or strip 19 for use as one of the contact members of the device. It is shown in a horizontal position but may be used vertically or at any angle desired.

20 is insulating material and 21 is a bracket carrying a flexible member 22 and a securing member 23. The insulating sleeve or member 24 is also secured in position by member 23, and a portion of it is shown as cut away at the front to provide an opening for contact of members 19 and 22. The said opening is indicated at 25.

The flexible member 22 is shown as consisting of a coil of wire or other conducting

material, giving it a tubular form and providing a sensitive, flexible member that absorbs the shock of a contact with member 19 when brought into contact at any velocity. It is of a light construction for practical purposes.

The bracket 21 is secured by screws 26. A binding post or suitable connection 27 is provided for wire 28 which extends the entire length of the trolley pole 11 to a point 29 where the tapered plug 30 and socket 31 are provided for disconnecting wire 28 in case of a broken trolley pole. The connection may be broken either manually or through the strain of a pull, if produced by the breaking of the pole 11. The wire 28 is continued to a point 32 where it branches and connects with two similar segmental contact members 33. The latter are separated from supports 34 by the insulating material 35 and said supports are secured by screws 36 to the disk member 37. A vertical pivot bolt 38 is provided and passes through the center of disk 37 into the roof of the car, serving as the vertical pivot for the pole 11. Two segmental contact members 39 are provided similar to members 33 and are secured to the roof of the car by screws 40 with insulating material 41 between. A wire 42 connects the two members 39 and from the point 43 a wire 44 connects with a street indicator (not shown). The plate 45 and springs 46 are provided to give tension to pole 11, as a practical feature in trolley car construction, and is no part of the invention. A suitable housing 46 is provided for the protection of the parts at the base of pole 11.

The construction as described provides an unbroken conducting connection from flexible member 22 to the wire 44 which leads to a street indicator. The said parts are insulated from the car and trolley pole respectively so that an operation of a street indicator will not occur until the flexible members 19 and 22 are brought into contact, electric power being supplied through wire 16. The conducting members 18 and 19 are charged with electric power from the trolley wire 16. The object of the construction is to provide means to shunt a current through the various parts to a street indicator and provide suitable means for permitting the ordinary movements of pole 11.

The parts 33 and 39 have curved surfaces that are in slidable contact, and the said parts are arranged in pairs at opposite sides of the disk member 37, parts 38 being secured to said disk member and parts 39 secured to the top of the car. The contact of the said members while the pole is being moved sidewise, allows the circuit to street indicator to remain unbroken for a limited period of time, during such a movement, whether from an accidental or desired cause. The construction and relation of the members 22 and 24 permits an operating contact with member 19 only when the car is moving forward. A reverse or backward movement of the car will not cause an operation of a street indicator, because of the insulating member 24.

From the construction as described it can be readily seen that the contact of members 19 and 22 will conduct a current through the member 21 to the connection 27 from which point it will pass through the insulated wire 28, members 31 and 30 to a point 32 and then to members 33 and 34 which will then con-

duct the current to wire 44 and thence to the street indicator for operation thereof.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. The combination with a trolley wire structure having a projecting spring contact piece, of a trolley pole, and an elastic contact member projecting therefrom and arranged to strike the contact piece, said contact member comprising a coiled spring.

2. The combination with a trolley wire structure having a projecting spring contact piece, of a trolley pole, and an elastic contact member projecting therefrom and arranged to strike the contact piece, said contact member comprising a coiled spring and a recessed sleeve of insulating material covering the rear side of said spring.

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

PERRY T. SPINDLER.

Witnesses:

CHAS. J. NIX,

JOHN H. HELWIG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."