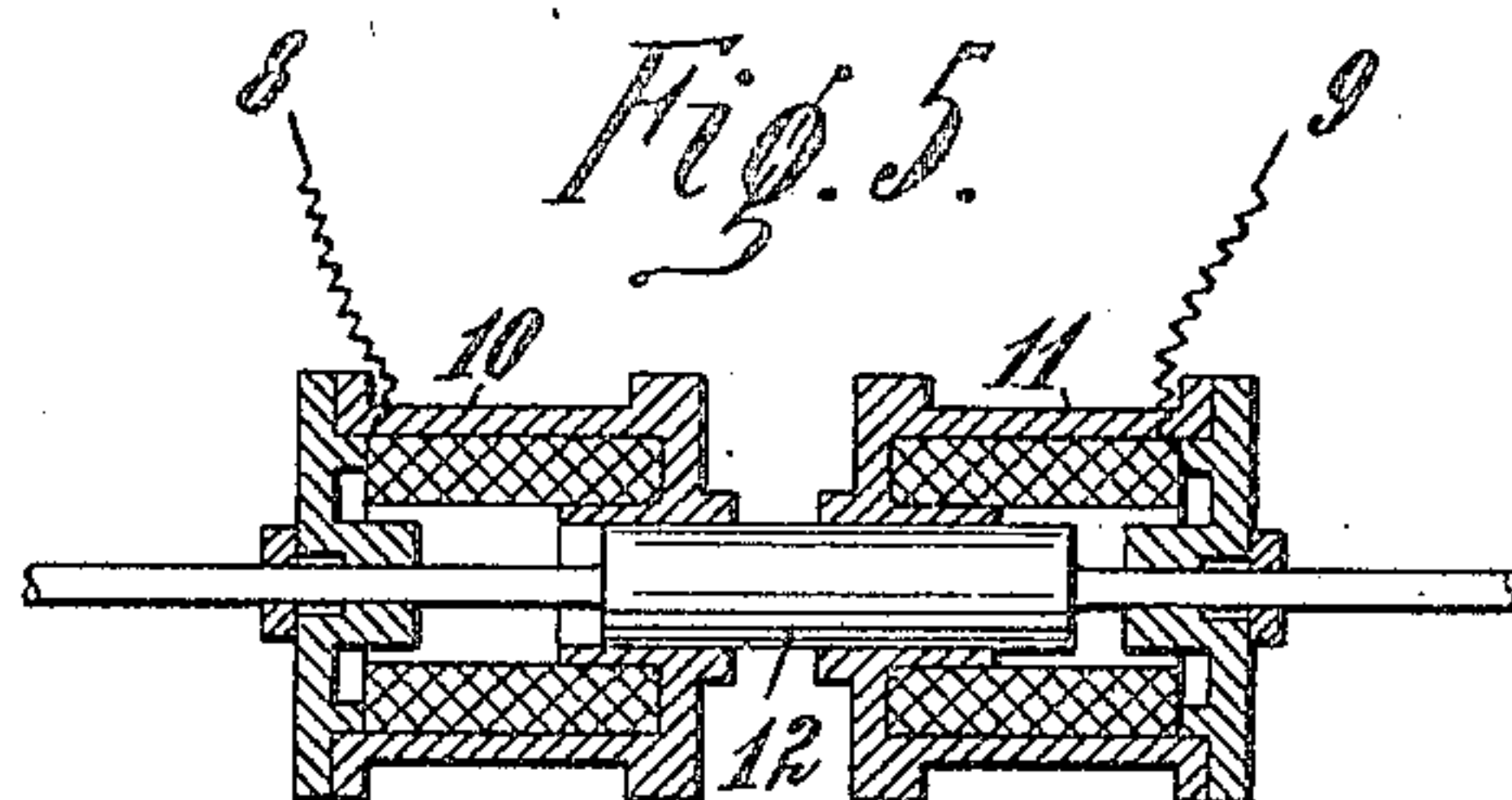
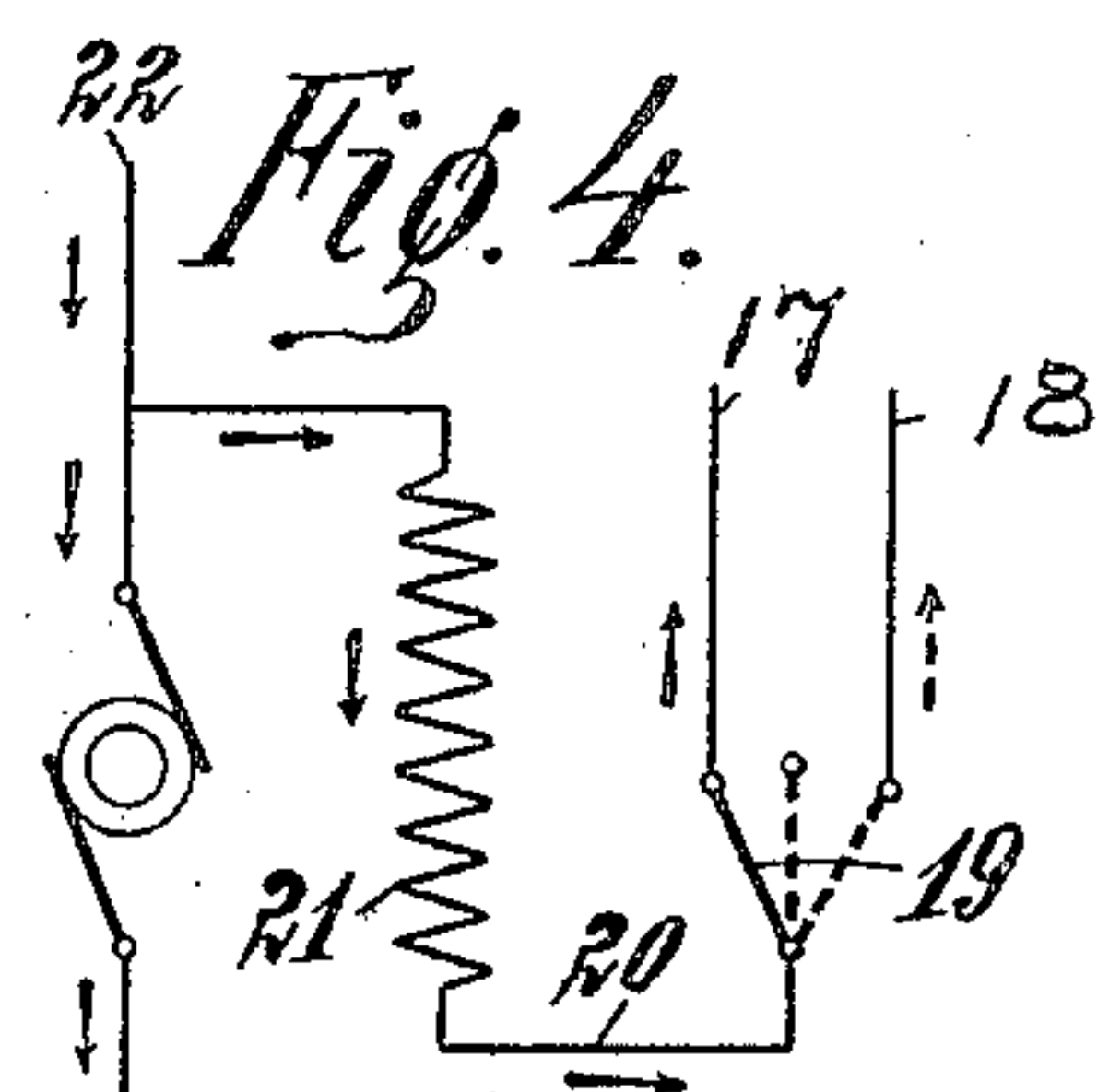
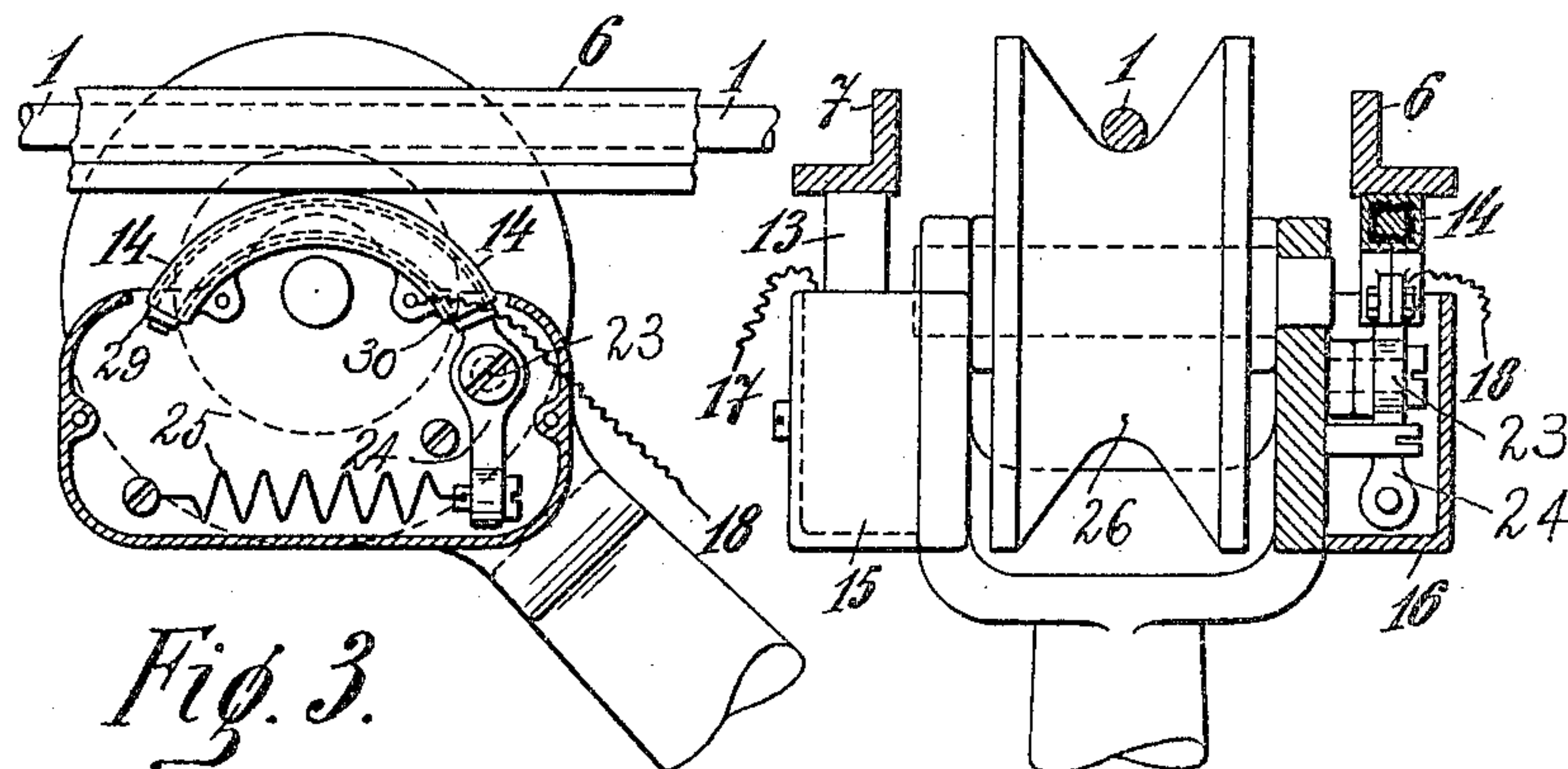
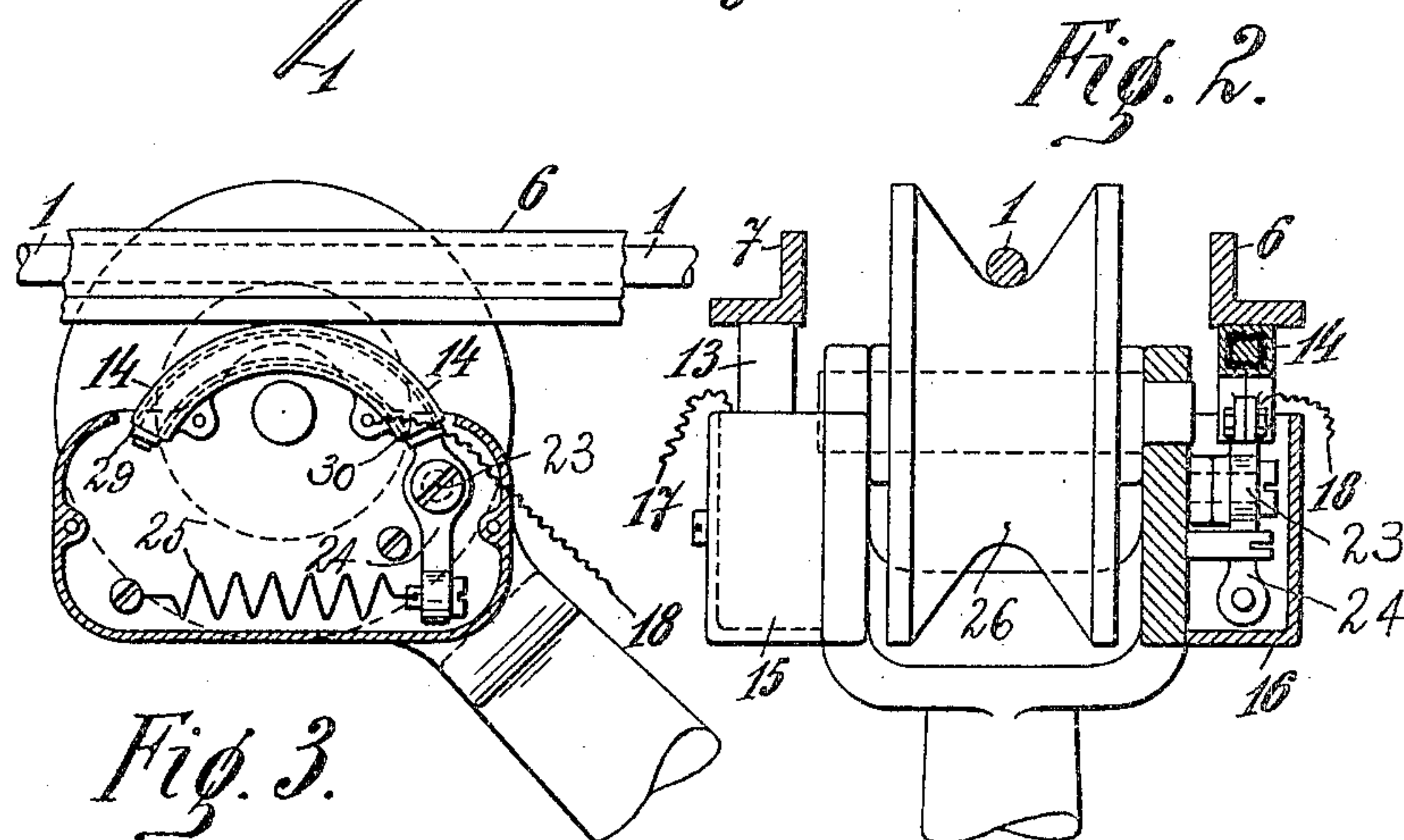
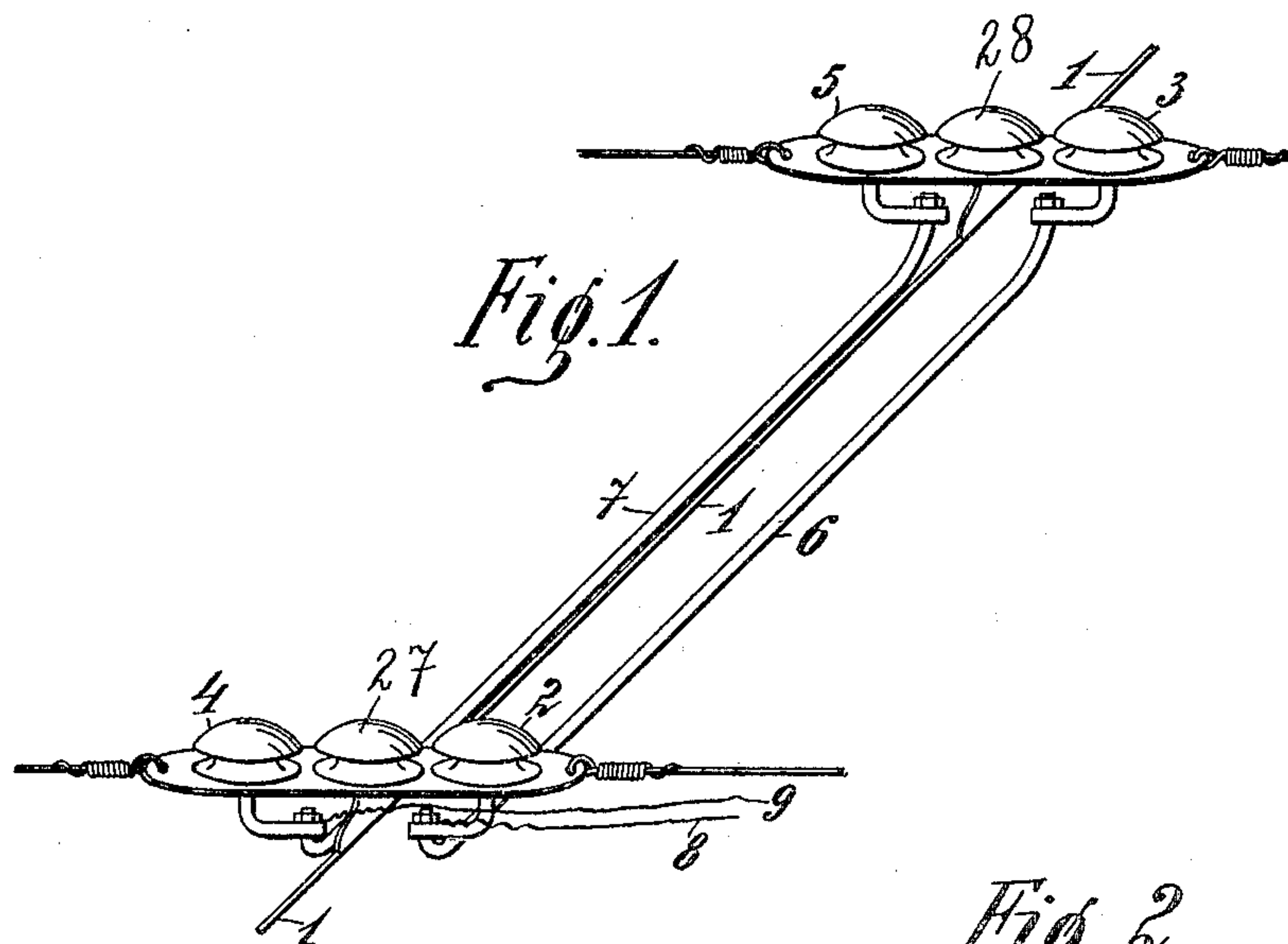


No. 813,154.

PATENTED FEB. 20, 1906.

V. JOKSCH & J. PETŘÍK.  
AUTOMATIC SWITCH FOR ELECTRIC RAILWAYS.

APPLICATION FILED MAY 26, 1905.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

VICTOR JOKSCH, OF KARLIN-PRAGUE, AND JOSEF PETŘÍK, OF PRAGUE,  
AUSTRIA-HUNGARY, ASSIGNORS OF ONE-THIRD TO RICHARD BUTTA,  
OF PRAGUE, AUSTRIA-HUNGARY.

## AUTOMATIC SWITCH FOR ELECTRIC RAILWAYS.

No. 813,154.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed May 26, 1905. Serial No. 262,427.

*To all whom it may concern:*

Be it known that we, VICTOR JOKSCH, residing in Karlin-Prague, and JOSEF PETŘÍK, residing in Prague, Kingdom of Bohemia, Austria-Hungary, subjects of the Emperor of Austria-Hungary, have invented a new and useful Automatic Switch for Electric Railways; of which the following is a specification.

Our invention relates to improvements in automatic switches for electric railways; and the object of this improvement is to control the railway-switch in the car itself by electricity. The tongue of the railway-switch is controlled by a solenoid with two coils, and the current can be sent to one or to the other of said two coils by changing the position of a small switch-lever in the car itself, said lever being arranged in a secondary current. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the conducting combination for feeding the switch machinery. Figs. 2 and 3 are two views and partly sections in a vertical elevation of the conducting-pulley with its contact appliances. Fig. 4 is a diagram showing the solenoid by means of which the tongue of the railway-switch is laid into one or the opposite direction. Fig. 5 shows the solenoid in elevation and its coils in section.

Similar numerals refer to similar parts throughout the several views.

To the right and to the left of the conducting-wire 1 are placed two secondary conducting bars or wires 6 7, provided with and held by four insulators 2 3 4 5. All three said conductors 1, 6, and 7 are parallel to each other, and the conductors 6 and 7 are connected with wires 8 9 with the coils 10 and 11 of the solenoid 12, which controls the railway-switch. It will be understood that if the current will be sent through 6 8 10 the tongue of the switch will move to the right, for instance, and if the current is sent through 7 9 11 the tongue will be moved to the opposite side. The conducting-pulley 26 of the car is provided with two contacts 13 and 14, which slide upon the conductors 7 and 6, while the pulley rolls on 1. The contacts 13 and 14 are pivoted in casings 15 and 16 and are connected by wires 17 and 18 with a switch-lever 19 in the car, said switch

being continually connected by a secondary wire 20 and the interposed resistance 21 with the chief line 22 in the motor-car. Said contacts are pivoted on screws 23, and the longer arm of each, which is curved, is normally pulled upwardly by a spiral spring 25, connecting the shorter arm 24 of said contact with the casing. The long arm of each contact is surrounded by insulation 29, and this in turn is inclosed in a tubular metal contact-piece proper, 30, to which one of the wires 17 18 is directly connected. If the switch 19 in the motor-car is put in contact with the wire 9, Fig. 4, the current passes through the other coil 11 of the solenoid, Fig. 5, while if said switch 19 occupies the center position, it being in no contact with the wires 8 and 9, no current will pass through the solenoids, and that during all the time as long as the contact-pulley of the trolley is sliding with its contacts 13 and 14 on the conductors 6 and 7.

We are aware that prior to our invention thereof automatic switches have been invented for electrical railways. We therefore do not claim such a combination broadly; but

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

The combination with the main conductor, an electrically-driven vehicle, and the main contact device carried by the latter, of two other conductors 6 and 7 arranged parallel with the main conductor, a switch-actuating part, separate magneto-electric devices controlling said part, said conductors 6 and 7 being each connected with one of said magneto-electric devices, a switch on the vehicle in permanent electric connection with the main contact device, curved spring-actuated contact devices pivoted in the main contact device and engageable each in its curved portion with one of the conductors 6 and 7, and conductors connected each to one of said spring-actuated contact devices and extending into contactible proximity to said switch, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

VICTOR JOKSCH.

JOSEF PETŘÍK.

Witnesses:

JOSEF OLNÁK,

LADISLAV VOJÁNEK