

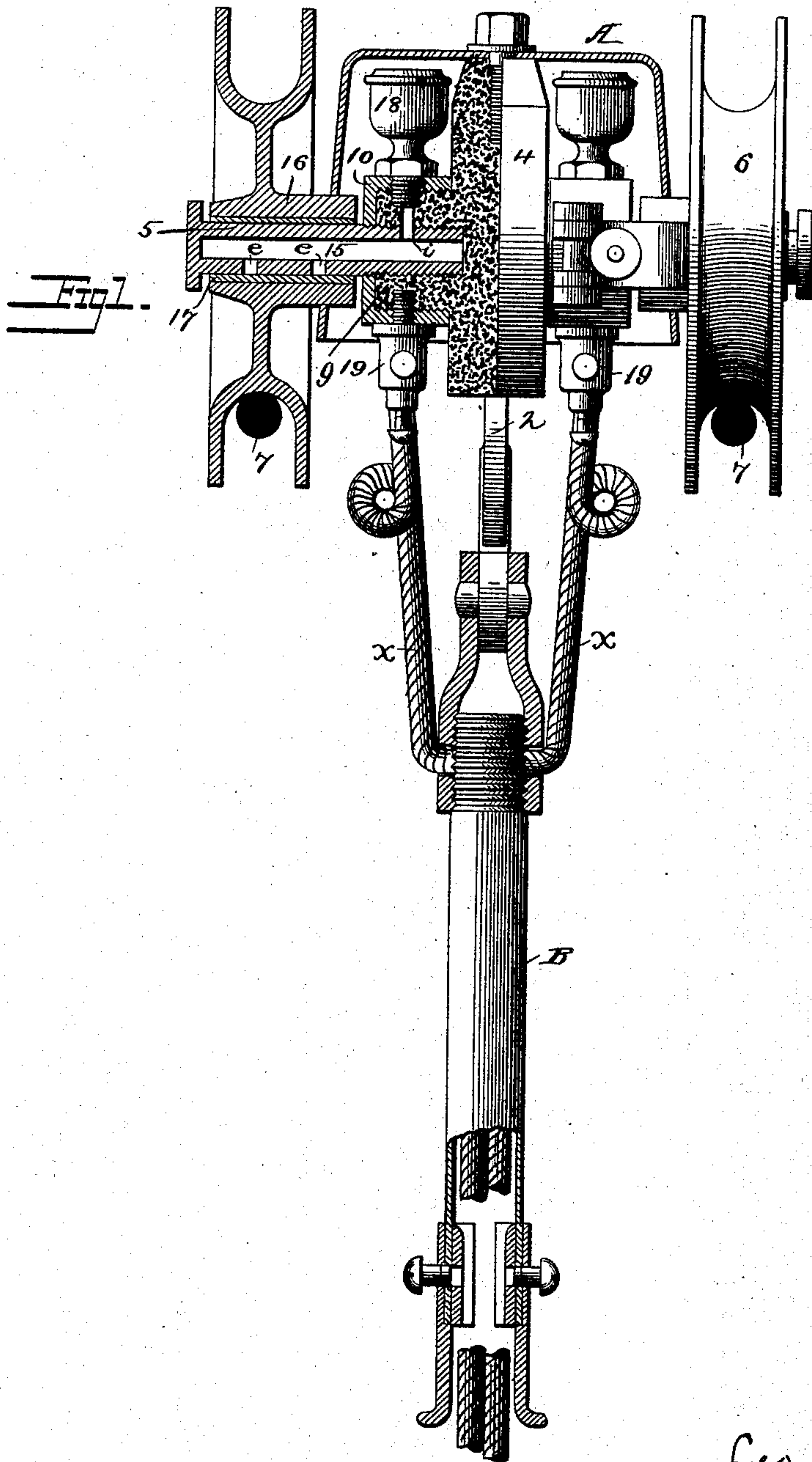
(No Model.)

2 Sheets—Sheet 1.

L. DAFT.
TRAVELER OR TROLLEY.

No. 388,538.

Patented Aug. 28, 1888.



Arrest:

Prof. Hinkel Jr.
A. C. F. Farnham.

Leo Draft.

Inventor:

Inter. Leeman
attp.

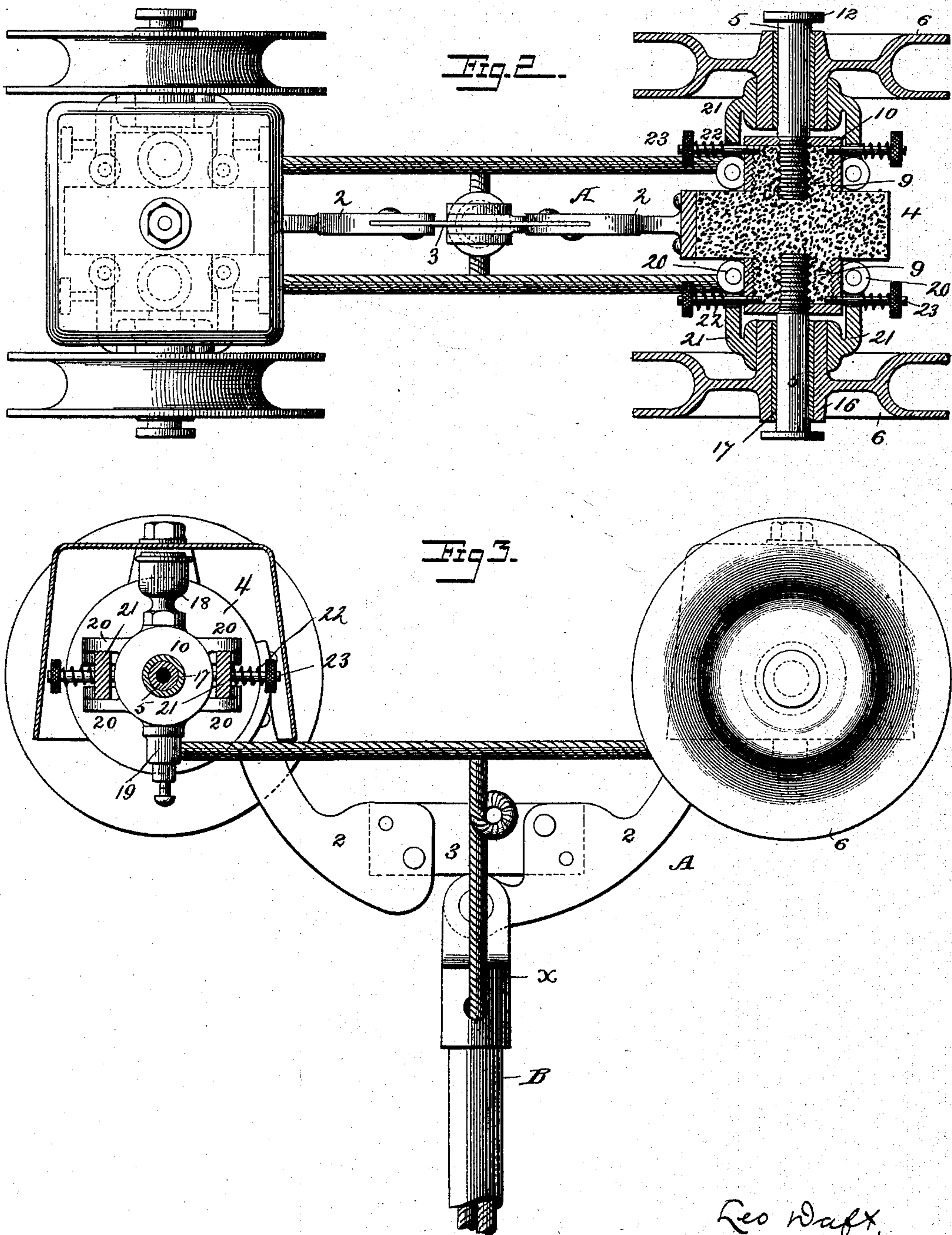
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TRAVELER OR TROLLEY.

No. 388,538.

Patented Aug. 28, 1888.



Attest:
John G. Hinkel Jr.
A. C. Hansmann.

Leo Daft,
Inventor:

By *Wm. A. Foster & Leeman*
Attys.

UNITED STATES PATENT OFFICE.

LEO DAFT, OF PLAINFIELD, NEW JERSEY.

TRAVELER OR TROLLEY.

SPECIFICATION forming part of Letters Patent No. 388,538, dated August 28, 1888.

Application filed January 4, 1887. Serial No. 223,361. (No model.)

To all whom it may concern:

Be it known that I, LEO DAFT, a subject of the Queen of Great Britain, and a resident of Plainfield, Union county, New Jersey, have
5 invented a new and useful Improvement in Travelers or Trolleys, of which the following is a specification.

My invention is a traveler or trolley designed to receive the electrical impulse from a conductor or conductors, generally an overhead
10 conductor, and to properly transmit said impulse to a motor upon the track.

A trolley embodying my invention is illustrated in the accompanying drawings, in
15 which—

Figure 1 is an end view, half in cross section, illustrating the improved trolley. Fig. 2 is a plan of the trolley, part in cross-section. Fig. 3 is a side elevation, in part section, of the
20 trolley.

The frame A of the trolley consists, preferably, of two parts flexibly or jointedly connected—for instance, of two downwardly-curved plates, 2 2—each riveted to an intervening stiff spring-blade, 3, and attached to
25 and supporting at its outer end a block, 4, of insulating material—as, for instance, a block of hard rubber, vulcanite, or other equivalent material or composition—and to this block are
30 connected the laterally-extending rods or bolts constituting the journals 5 5 of the deeply-grooved wheels 6 6, which rest upon the parallel conductors 7.

As the parallel conductors may not always
35 be exactly in line with each other, I avoid friction and binding upon the wheels by making the journals 5 of such length that the wheels can play laterally thereon to accommodate themselves to the irregularities of the conducting-track, and in order to hang the center of
40 gravity of the trolley or traveler as low as possible I extend the central portion of the frame A downward below the track, as shown, and hang thereto, preferably to one of the plates
45 2 by means of a pivot, a hollow shield or tube, B, through which extend the flexible conductors *x x*.

In order to secure a strong attachment of the journals to the non-conducting blocks 4, I provide each of the latter with two circular side
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bosses, 9 9, each threaded externally to receive a threaded cap, 10, through which into a threaded socket in the block extends the screw end of one of the journal-pins, a head at the outer end of said pin limiting the lateral play
55 of the wheel 6 thereon.

To properly lubricate the wheels, I make each of the journal-pins hollow or with a central channel, 15, provided with lateral outlets *e e*, occupying a position within the hub 16 of
60 the wheel, which may have a suitable lining, 17, and with an inlet-opening, *i*, below the drip-opening of an oil-cup, 18, supported by and above the screw-cap 10, as best shown in Figs. 1 and 3. By this means a constant supply of oil is
65 caused to flow to the journal of each wheel. The presence of the lubricant upon the journal has been found to interfere with the free conduction of electricity from the conducting-rails to the wheels, frame, and conductors *x x*.
70 I therefore provide for a connection between the said conductors and the outer surface of each wheel by means of contact-pieces bearing against some portions of the wheels, and electrical connections between said contact-
75 pieces and the conductors. For instance, each conductor *x* is connected to a binding-post, 19, secured to the under side of one of the caps 10, and each of the latter is provided with ears 20, between which are pivoted one or more con-
80 tact-levers, 21, the outer end of each lever bearing against the hub of the adjacent wheel, and a spring, 22, upon a screw-pin, 23, extending into the cap 10, bears against each contact-lever, and by turning the said screw-pin any
85 desired tension is put upon the spring. I thus insure a perfect metallic contact with the wheels when they are in rapid rotation and a passage for the current independent of the axle or journal. It will be evident that the
90 contact-pieces may bear against the sides or ends of the wheels, and instead of being pivoted levers or arms they may consist of spring-blades.

I have before referred to the fact that the
95 frame consists of two sections flexibly connected. The object of this is to permit the trolley to pass freely upon short curves presented by turn-outs and deflections of the track. Instead of the central flexible connection shown, one
100

pair of wheels may be mounted upon a truck constituting a part of the frame and pivotally connected to the other part. In each case each pair of wheels is maintained with the axle substantially at right angles to the line of the track.

I have referred to the trolley as having two pairs of wheels; but my improvements may be embodied in a trolley having a single wheel at each end, so as to run upon a single conducting-wire, the pendent portion of the frame A balancing the wheels, so as to maintain the upright position of the trolley.

The frame and insulating blocks may be differently constructed from the forms shown in the drawings without departing from the main features of my invention.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, with two substantially-parallel electric conductors, of grooved collecting-wheels adapted to travel in contact with said conductors and carried by a frame provided with laterally-extending journals, upon which said wheels are mounted to have a lateral sliding as well as a rotary motion thereon, substantially as described.

2. An overhead trolley consisting of the frame A, composed of two parts supported by grooved wheels, and having plates 2, projecting downward from said parts and toward each other, and a flexible connecting-plate, 3, between the plates 2, substantially as described.

3. An overhead trolley having a frame, A, composed of two parts supported by wheels, and having plates 2 projecting downward from said parts and toward each other, and the flexible spring connecting-plate 3 between the plates 2, in combination with a hollow shield, B, pivotally hung from one of said plates 2, and the conductor passing through the shield, substantially as described.

4. A trolley provided with a frame supporting an insulating-block at each end, journal-pins extending from each block and supporting wheels, and conductors supported by the frame in electrical connection with the wheels, substantially as set forth.

5. The combination, with the insulated blocks and journals of the frame, of wheels turning on the journals, and pivoted contact-pieces bearing upon the wheels and electrically connected with conductors supported by the frame, substantially as set forth.

6. The combination of the insulated journals, wheels, pivoted contact-pieces, and springs and adjusting devices, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEO DAFT.

Witnesses:

JOHN N. BRUNS,
FRED H. REED.