

(No Model.)

W. CHRISTY.

SWITCH FOR ELECTRIC MOTOR TROLLEYS.

No. 402,064.

Patented Apr. 23, 1889.

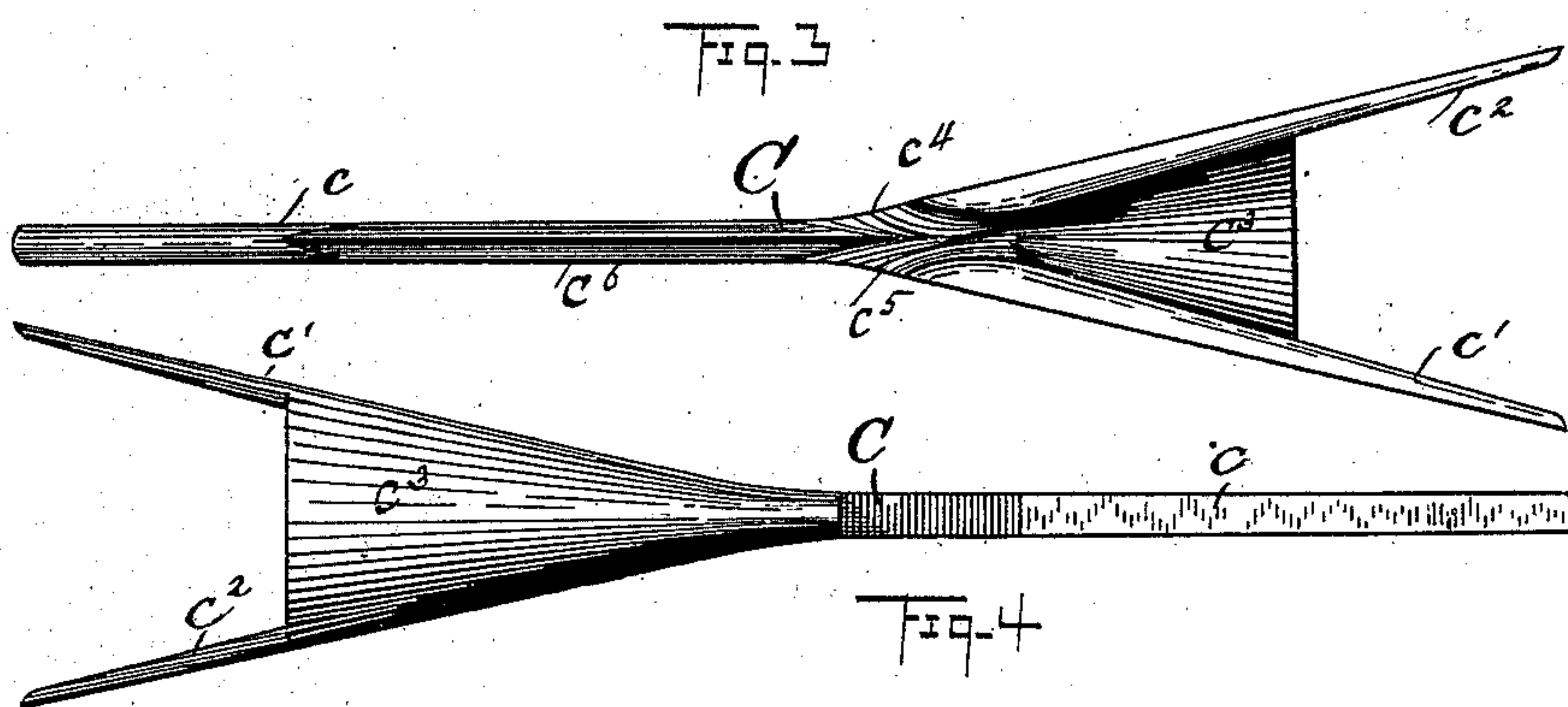
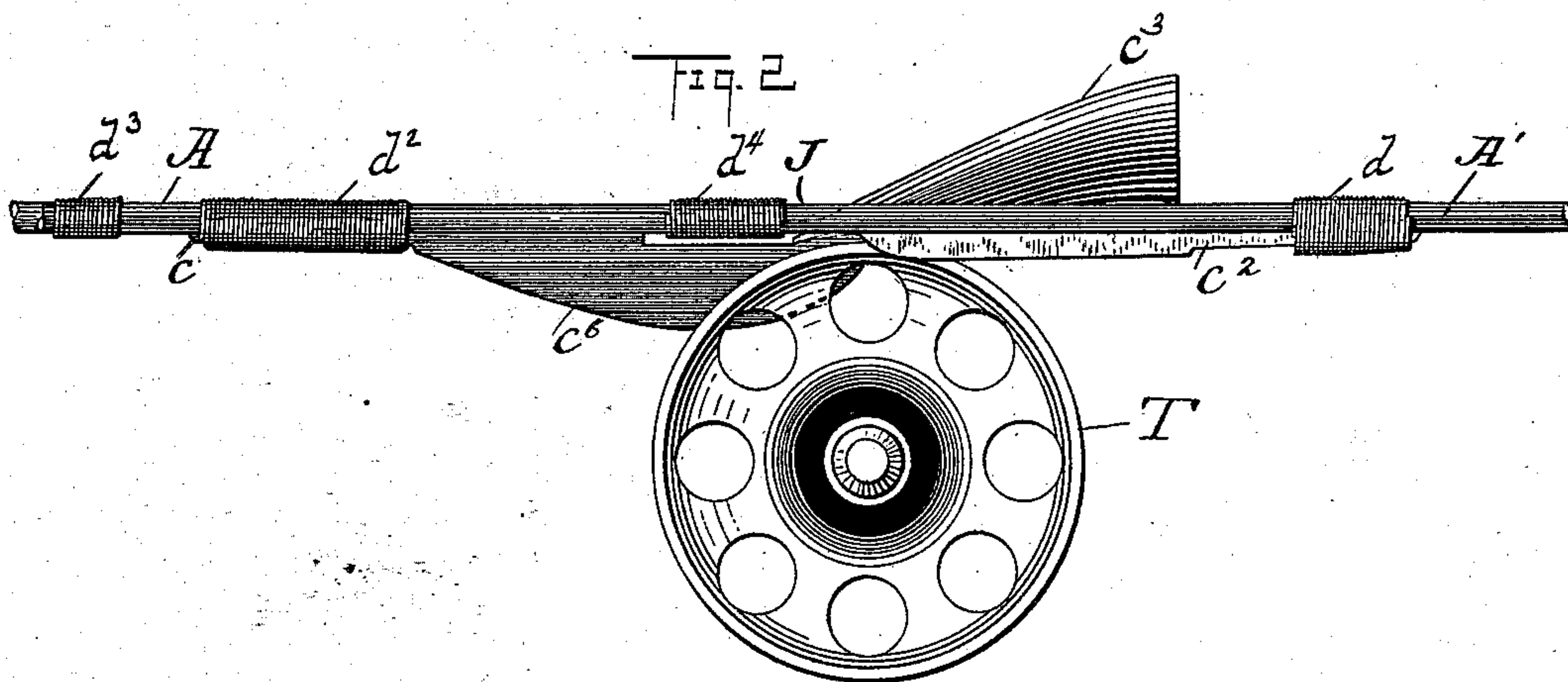
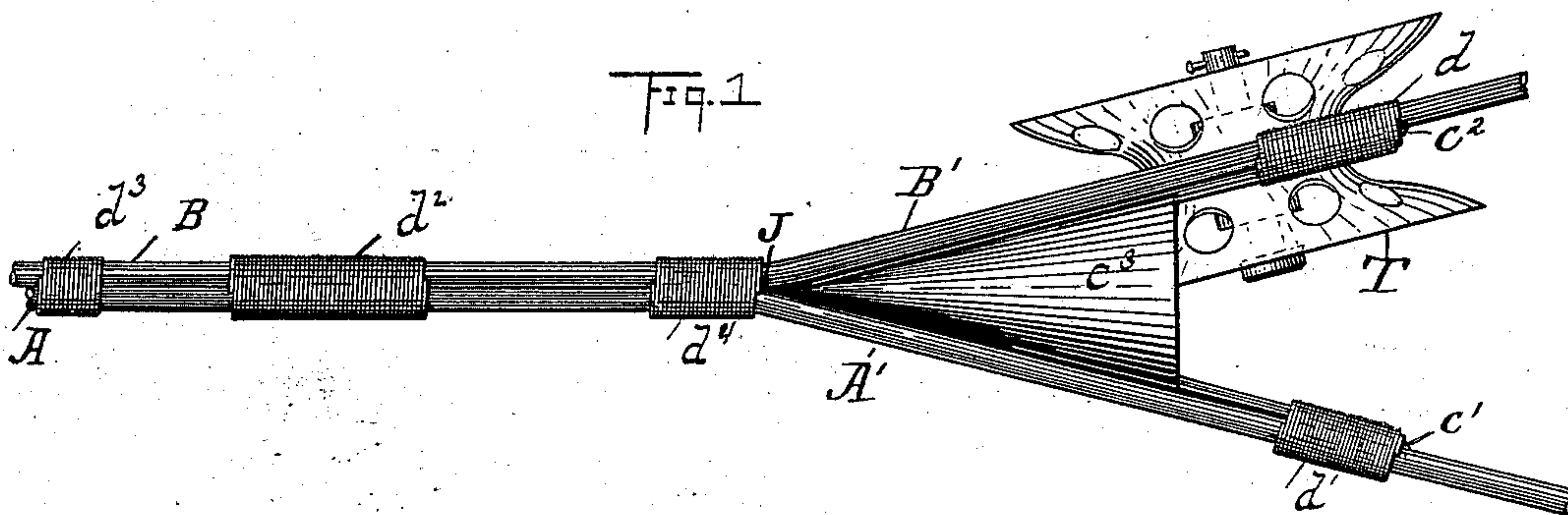


Fig. 4

Witnesses.

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WILL CHRISTY, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO JAMES CHRISTY, JR., OF SAME PLACE.

SWITCH FOR ELECTRIC-MOTOR TROLLEYS.

SPECIFICATION forming part of Letters Patent No. 402,064, dated April 23, 1889.

Application filed December 27, 1888. Serial No. 294,762. (No model.)

To all whom it may concern:

Be it known that I, WILL CHRISTY, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Switch for Electric-Motor Trolleys, of which the following is a specification.

My invention relates to the switches which serve to deflect electric-railway trolleys from one to another of several branching overhead line-wires at junction-points; and the object of my invention is to produce a simple and inexpensive form of trolley-switch which shall be entirely self-acting and perfectly reliable in operation, and which may be readily applied to and removed from its operative position.

To the above purpose my invention consists in the peculiar and novel features of form, construction, and arrangement hereinafter described, and specifically pointed out in the claim.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of a line-wire junction with my improved switch applied thereto. Fig. 2 is a side elevation of the same, the trolley being shown in a different operative position. Fig. 3 is an under side view of the switch in detached condition. Fig. 4 is a reversed view of the same.

In the said drawings, A and B designate two overhead line-wires of an electric-railway or other motor system, which at the point J branch off from each other, so as to form the branches A' B', respectively, such junction-point being perpendicularly above a similar junction of the railway or tracks. (Not shown.)

C designates my improved trolley-switch, which is approximately of Y form, being composed of the stem c and the arms c' c^2 diverging from each other at one end of said stem, and preferably formed integrally therewith at their points of union with the same. At the point of separation of the branches or arms c' c^2 from the stem c a concavo-convex web, c^3 , which preferably forms an integral part of the switch, extends outward a suitable distance toward the extremities of the arms c' c^2 , as

shown. When the switch is in operative position, the concave side of the web is underneath the switch.

c^4 c^5 designate two grooves or channels, which are formed upon the under side of the stem c , and which converge toward the point of union of the stem with the arms c' c^2 , so as to communicate with the under surface of the web c^3 .

c^6 designates an elongated flange or rib, which extends longitudinally of the stem c on its under side, and which is preferably formed integrally with said rib, as shown. The contour of the lower edge or margin of the rib c^6 is approximately that of half of an ellipse, the line of curvature being, however, quite full or blunt contiguous to the web c^3 and quite gradual at the opposite point, substantially as shown in Fig. 2.

The switch is secured in position by means of wrappings d d' d^2 of wire, the wrappings d d' embracing the branched wires A' B' and the arms c' c^2 of the switch, and the wrapping d^2 embracing the stem c and contiguous portions of the line-wires A B. The line-wires A B are preferably bound together by wrappings d^3 d^4 , similar to those above described, and a notch, c^7 , is made in the upper part of the stem c to receive the lower strands of the wrapping d^4 . In order to securely retain the various parts, the several strands of each of the above-described wrappings are held together by solder, so as to effectually prevent dislocation of the adjacent parts.

The switch itself is made of brass or other electrical conductor, and all of its parts are preferably formed integral with each other, although if separable no departure from the essential spirit of my invention will result.

T designates the trolley, which is of the usual or any preferred form, and the operation of the switch in connection with the trolley is as follows:

It is to be borne in mind that the trolley trails behind the car as it passes the switch, so that the trolley is drawn into an oblique position relative to the axial center of the line-wires. This oblique position of the trolley causes the trolley-wheel to engage at one or the other of its marginal flanges with either the groove c^4 or c^5 , and thus automatically deflect the trolley upon either the branch c' or

c^2 , or either from the branches c' c^2 upon the main wires A B, according to the direction of the car. In thus passing in either direction along the junction of the overhead wires the web c^3 preserves the electrical contact between the trolley and the line-wires, and thus maintains the normal power of the motor.

From the above description it will be seen that I have produced a simple and compact form of switch, which may be readily applied to the line-wires at the points of juncture, and which is entirely automatic and perfectly regular in its action.

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

As a new article of manufacture, a switch for electric-motor trolleys, consisting of a stem and divergent arms, a concavo-convex web extending from the point of junction of the stem and arms, and a rib or flange extending longitudinally of the switch and serving to divert the trolley upon and off of the branch wires, substantially as described.

In testimony that I claim the above I hereunto set my hand.

WILL CHRISTY.

In presence of—

C. P. HUMPHREY,
JNO. L. CONDRON.