

No. 789,383.

PATENTED MAY 9, 1905.

C. L. ROGERS.
ELECTRIC TROLLEY.
APPLICATION FILED NOV. 30, 1903.

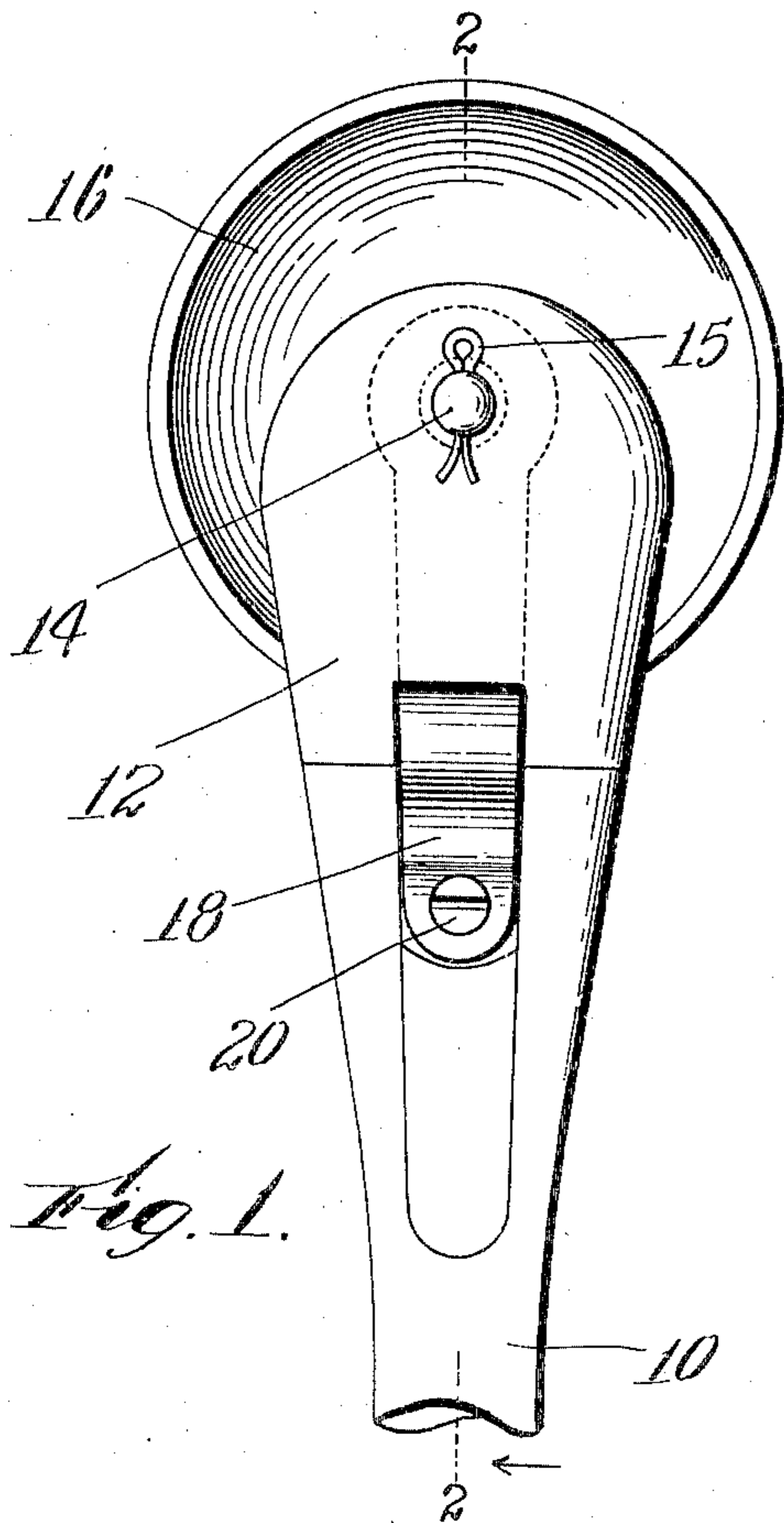


Fig. 1.

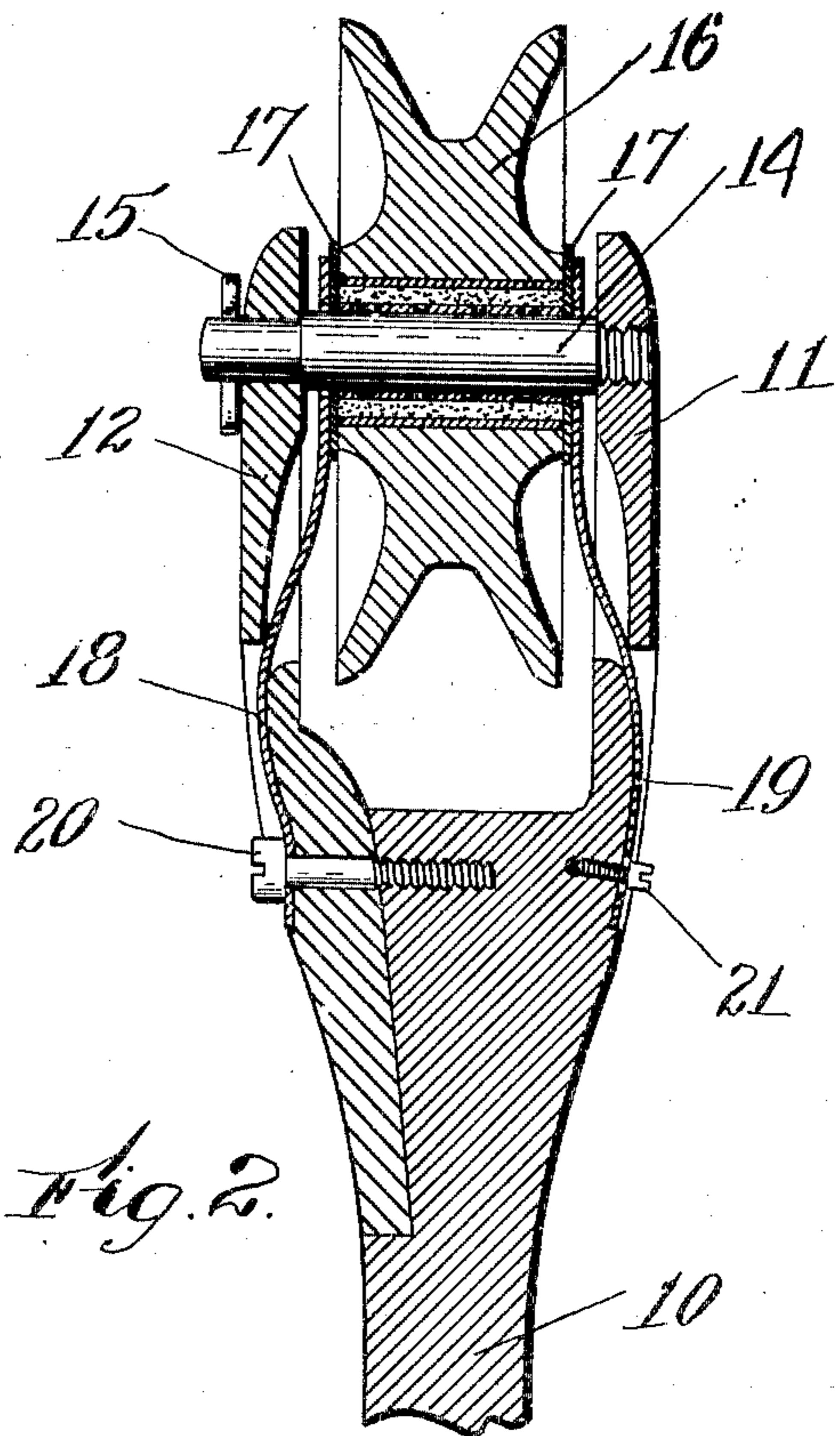


Fig. 2.

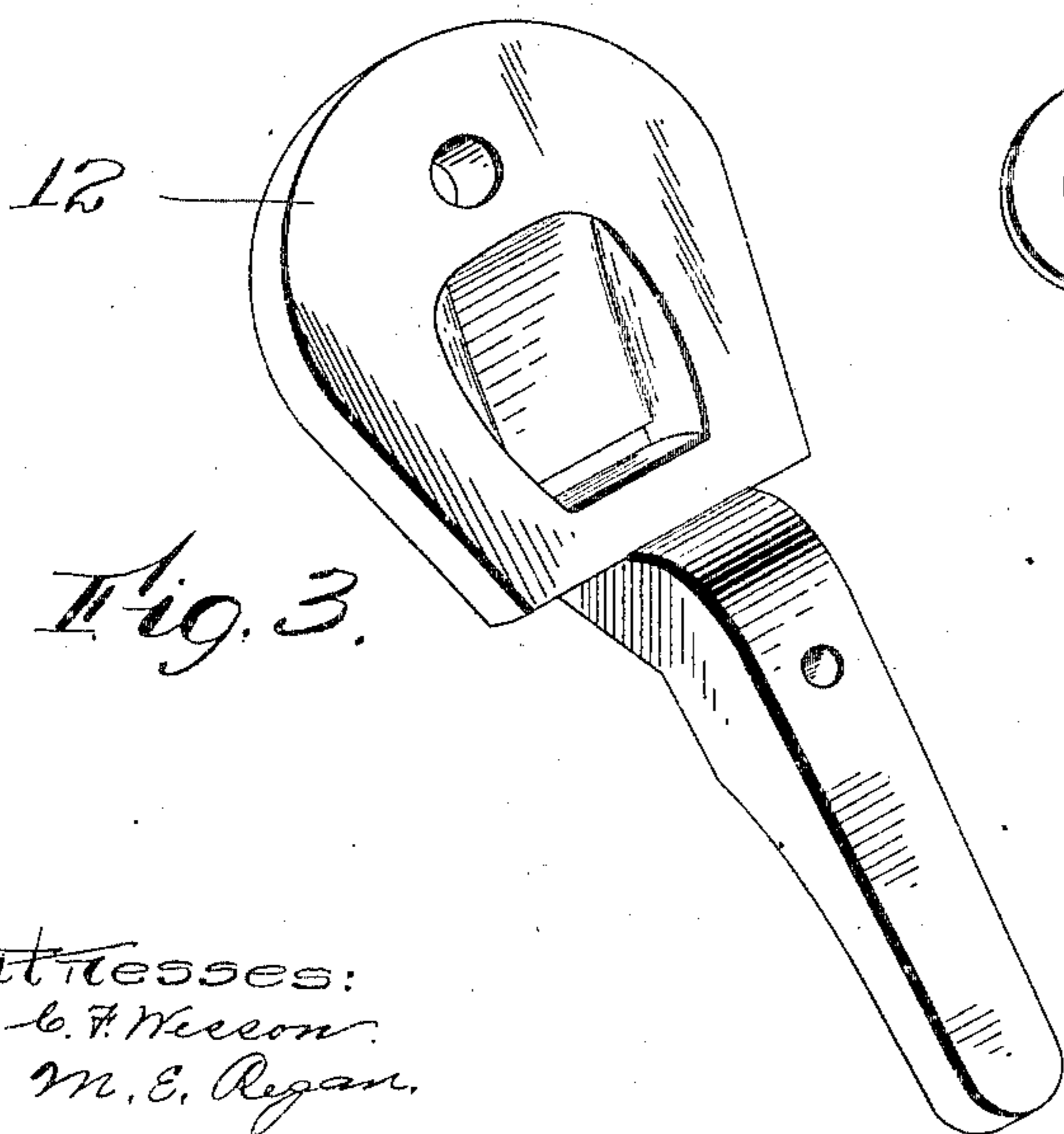


Fig. 3.

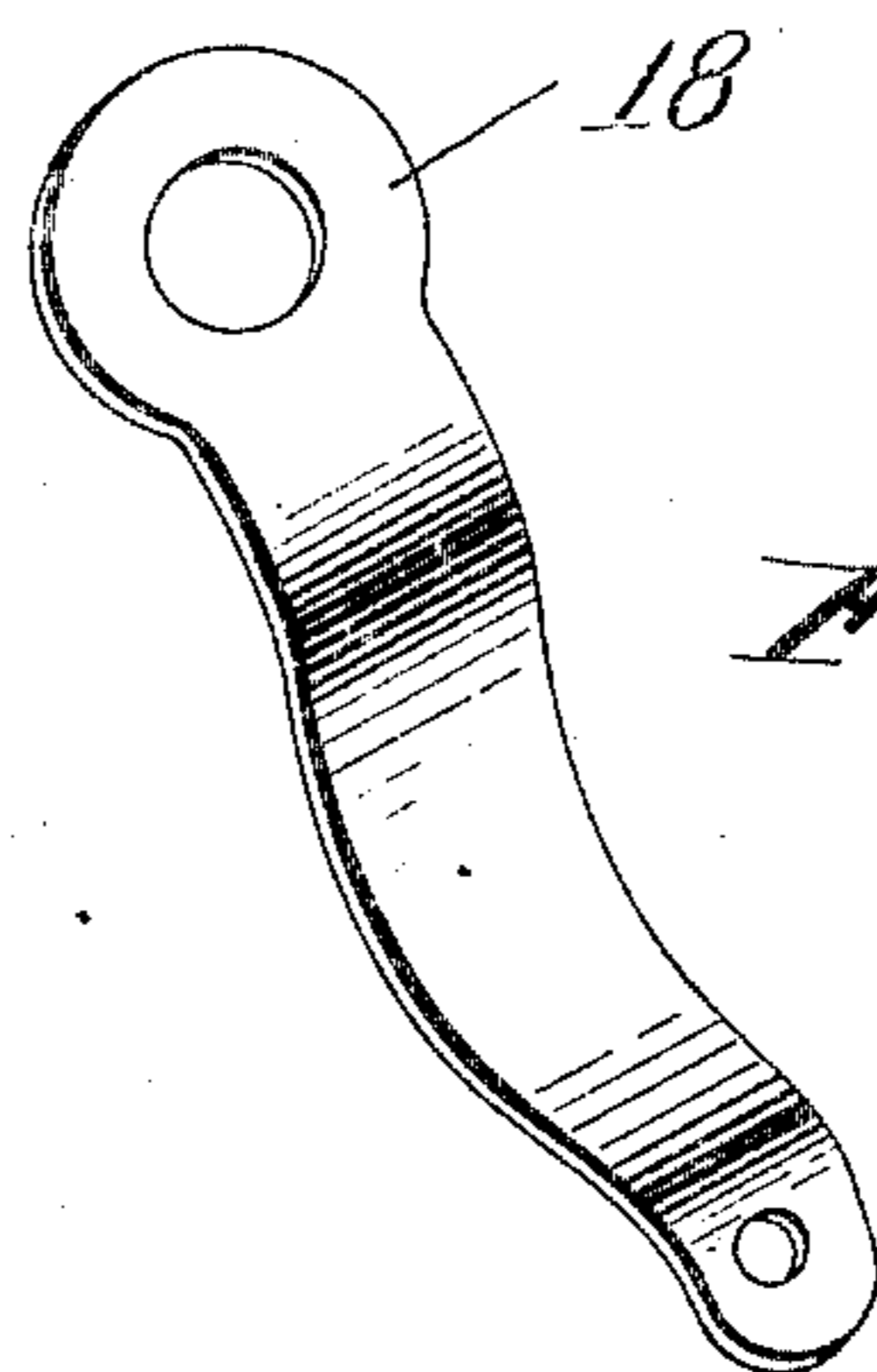


Fig. 4.

Witnesses:
C. F. Wilson.
M. E. Regan.

Inventor:
C. L. Rogers
By his Attorneys
Southgate & Southgate

UNITED STATES PATENT OFFICE.

CHARLES L. ROGERS, OF UXBRIDGE, MASSACHUSETTS.

ELECTRIC TROLLEY.

SPECIFICATION forming part of Letters Patent No. 789,383, dated May 9, 1905.

Application filed November 30, 1903. Serial No. 183,090.

To all whom it may concern:

Be it known that I, CHARLES L. ROGERS, a citizen of the United States, residing at Uxbridge, in the county of Worcester and State of Massachusetts, have invented a new and useful Electric Trolley, of which the following is a specification.

This invention relates to an improved trolley-head for use on electric railways.

The objects of this invention are to provide a strong, simple, and efficient form of trolley-head in which the parts are detachably connected to permit the ready replacement of trolley-wheels and conductor-springs.

The especial object of the invention is to provide a construction which can be readily repaired if the parts are broken or displaced during actual use upon a car.

To these ends this invention consists of the trolley-head and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a side view of a trolley-head constructed according to this invention. Fig. 2 is a sectional view thereof, taken on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the detachable side piece, and Fig. 4 is a perspective view of a conductor-spring therefor.

In ordinary trolley constructions the current is taken from the trolley-wheel through conductor-springs, which are usually arranged to bear on the sides of the trolley-wheel hub. In the actual use of these trolley-wheels whenever the conductor-springs are broken, worn or give out, or for any other cause, the current passes through the bearing pin or stud. In doing this a heavy resistance is opposed to the trolley-current, which will speedily burn out the trolley-wheel and its support.

In constructions which are now employed the conductor-springs are fastened in place in a variety of ways. In all such constructions, however, with which I am familiar the replacement of these conductor-springs is a matter of considerable difficulty, frequently requiring special tools and appliances.

The person in charge of an electric car will seldom attempt to replace or renew conduc-

tor-springs of a trolley-wheel, or if renewals are attempted they usually require so much time as to interfere with the running time or perhaps block the road. To overcome this difficulty, I have provided a trolley-head in which the conductor-springs have their ends extended out through slots in the side pieces of the trolley-head and in which one of the side pieces is detachably fastened in place, so that it can be removed when the parts are to be renewed or replaced.

Referring to the accompanying drawings and in detail, 10 designates the ordinary trolley-pole. Extending up from the trolley-pole 10 are the side pieces 11 and 12. The side piece 11 forms a permanent fixture of the trolley-pole 10, while the side piece 12 is provided with an extending tongue or arm fitting into a corresponding socket. A fastening-screw is employed for detachably holding the side piece in place, and, if desired, it is also used for fastening a conductor-spring, as hereinafter explained. Threaded into or otherwise rigidly secured to the side piece 11 is the pin or bearing-stud 14. At its opposite end the stud 14 may be provided with a cotter-pin 15. Journaled on the stud 14 is the ordinary trolley-wheel 16, and coöperating with the trolley-wheel 16 are the conductor-springs 18 and 19. Washers 17 are preferably interposed between the conductor-springs and the hub of the trolley-wheel.

The conductor-springs 18 and 19 have their lower ends extending out through slots to the outside of the trolley-head. The curvature of these conductor-springs is such that when the parts are fastened together the pressure against the side of the trolley-wheel will throw the ends of the springs back into their sockets.

The detachable side piece 12 may be secured in place by a tap-bolt 20, and this tap-bolt 20 may also be employed for fastening the lower end of the conductor-spring 18 in place, although, as previously stated, the pressure at the sides of the trolley-wheel will tend to bend the spring in place, and this will suffice to hold the spring in place, if desired. At the lower end of the conductor-spring 19 I may also use a fastening-screw 21. In the

use of a trolley-head as thus constructed by taking off the detachable side piece the trolley-wheel, wearing-washers, and conductor-springs may be removed and new parts
5 dropped into place, so that renewals can be made with substantially no loss of time.

I am aware that changes may be made in practicing this invention by those who are skilled in the art without departing from the
10 scope thereof as expressed in the claims. I do not wish, therefore, to be limited to the construction I have herein shown and described; but

What I do claim, and desire to secure by
15 Letters Patent of the United States, is—

1. In a trolley-head, the combination of a fixed slotted side piece, a detachable slotted side piece with a tongue fitting into a corresponding socket, conductor-springs having
20 their ends extending out through the slots in the side pieces to the outside of the trolley-head, and a bolt fastening the detachable side pieces and one of the conductor-springs in place.

25 2. In a trolley-head, the combination of a fixed side piece, a detachable side piece having a tongue engaging a corresponding socket, a stud carried by one of the side pieces and

extending through the other side piece, a
trolley-wheel journaled on the stud, conduc- 30
tor-springs engaging the hub of the trolley-wheel, and a fastening-screw extending transversely through the tongue of the detachable side piece, and threaded into the fixed side
piece for holding the detachable side piece in 35
place.

3. In a trolley-head, the combination of a fixed side piece, a detachable side piece having a tongue engaging a corresponding socket,
a stud carried by one of the side pieces and 40
extending through the other side piece, a trolley-wheel journaled on the stud, conductor-springs having their lower ends extending out through slots to the outside of the
trolley-head, and a fastening-screw extend- 45
ing transversely through one of the conductor-springs and the tongue of the detachable side piece, and threaded into the fixed side piece to fasten the parts together.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 50
witnesses.

CHARLES L. ROGERS.

Witnesses:

PHILIP W. SOUTHGATE,
J. ELMER HALL.