

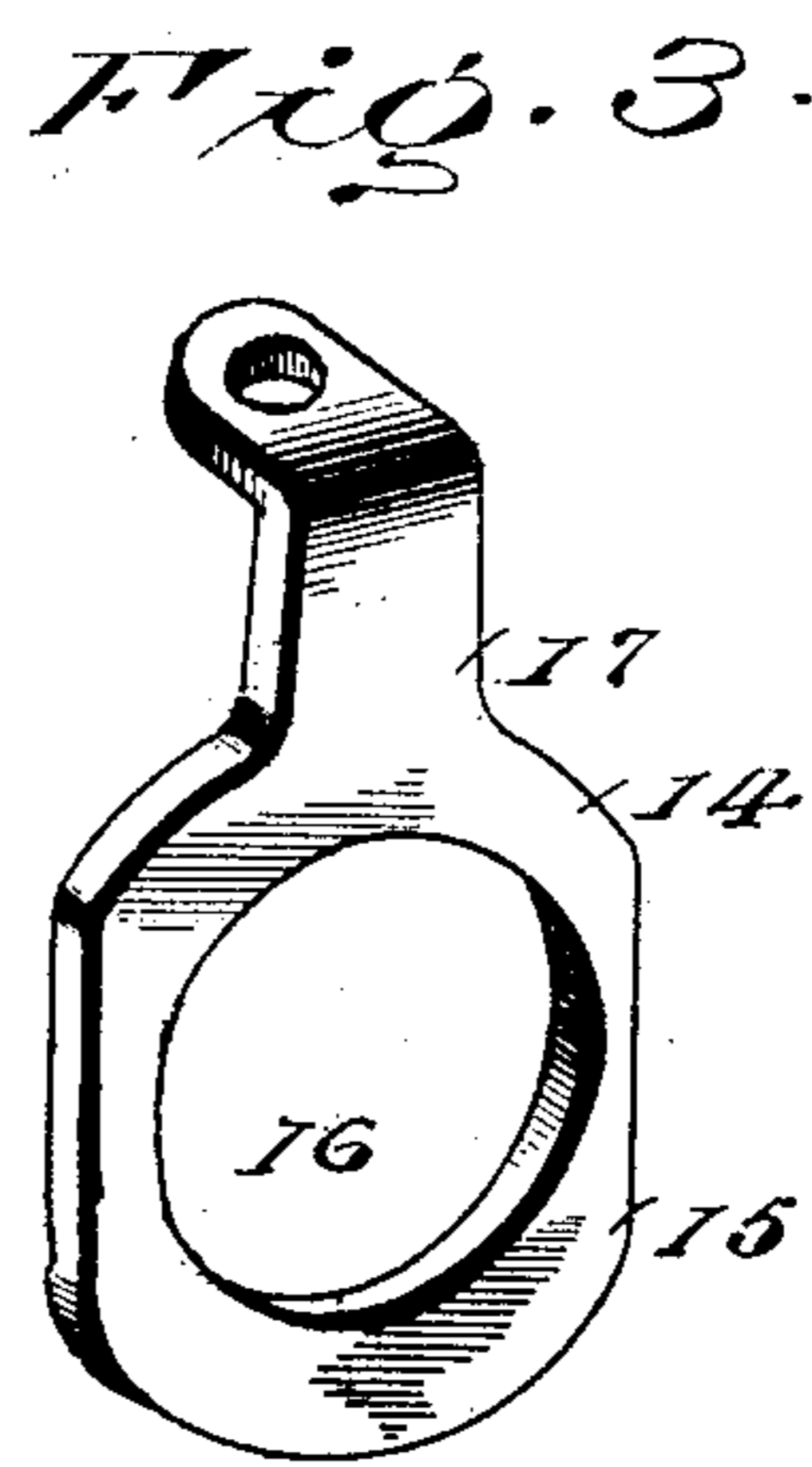
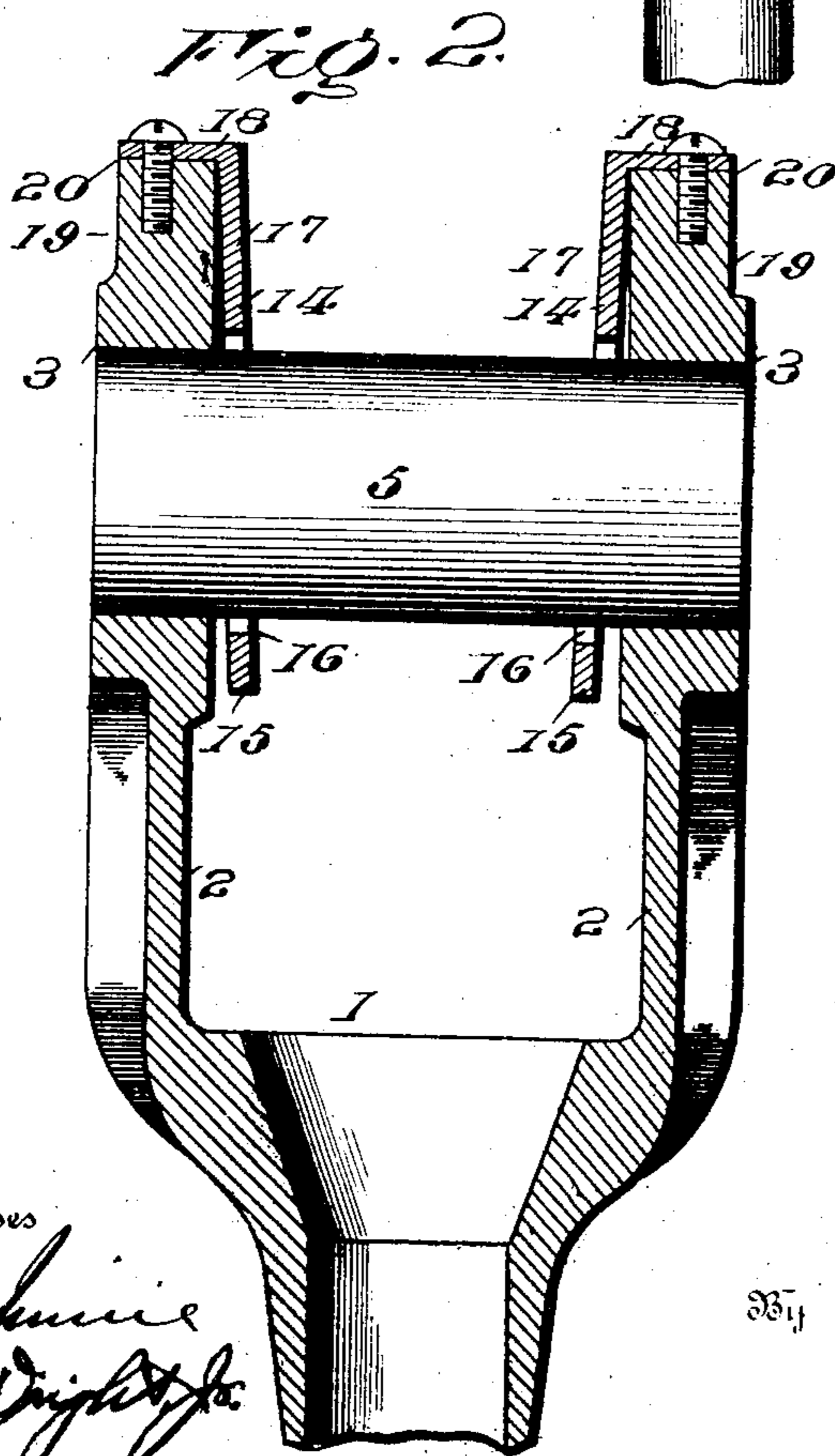
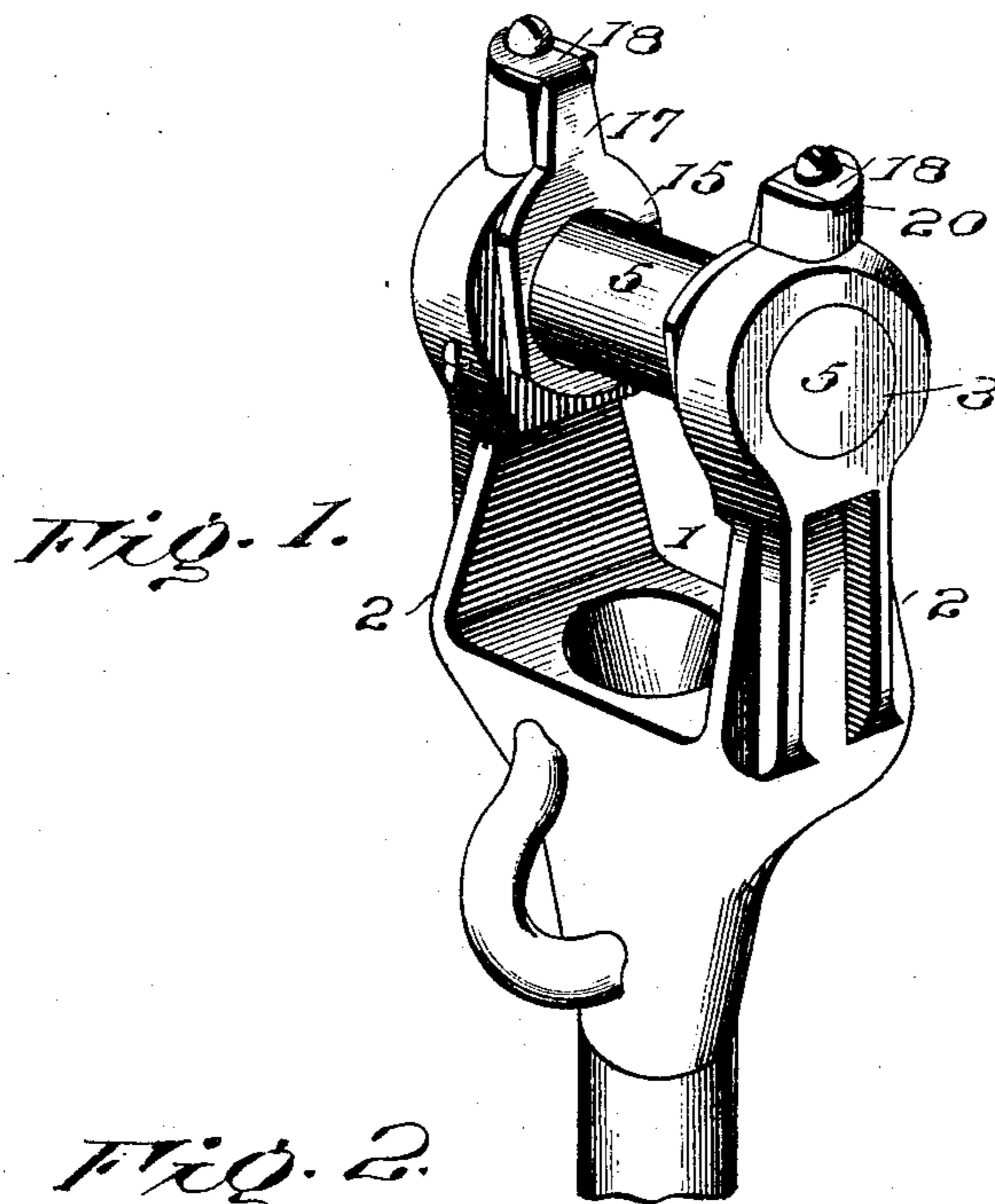
No. 765,075

PATENTED JULY 12, 1904.

C. L. HOOPER.
TROLLEY HARP.

APPLICATION FILED DEC. 15, 1903.

NO MODEL.



Witnesses

Perkin
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Inventor

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UNITED STATES PATENT OFFICE.

CHARLES L. HOOPER, OF ROCHESTER, NEW YORK.

TROLLEY-HARP.

SPECIFICATION forming part of Letters Patent No. 765,075, dated July 12, 1904.

Application filed December 15, 1903 Serial No. 185,264. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. HOOPER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented new and useful Improvements in Trolley-Harps, of which the following is a specification.

My invention relates to improvements in trolley-harps, and the object of which is to produce simple and effective electrical contacts for engagement with the trolley-wheel.

In the accompanying drawings, Figure 1 is perspective view of a trolley-harp embodying my invention. Fig. 2 is a vertical view of the same. Figure 3 is a detached view of one of the contacts.

Referring now to the drawings, 1 indicates the forked portion of the device, having, as usual, the two parallel arm portions 2. These parallel arm portions are provided with transverse openings 3. Passing through these openings is a shaft 5, which receives the trolley-wheel and upon which it revolves.

The spring-contacts 14 have enlarged ends 15, with passage-ways 16, through which the shaft 5 passes, and with upwardly-extending arms 17, having their upper ends 18 turned laterally and secured to the upwardly-extending projections 19 through the medium of suitable grooves 20. The spring-contacts serve to form electrical connections between the trolley-harp and the trolley-wheel, and the whole device is so simple that the trolley-wheel, the

shaft, and the contacts can be readily and quickly removed or replaced in position. Any desired means may be provided for holding the shaft 5 in position in the forked members, as this forms no part of my present invention.

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

1. A trolley-harp comprising parallel arms, a shaft supported by the arms, and spring-contacts consisting of members having downwardly-extending portions embracing the said shaft.

2. An improved trolley-harp having parallel arms, the upper ends of the arms provided with extensions, a wheel-shaft supported by the arms, and contacts consisting of members having arms secured to said extensions and projecting down at each side of and adapted to engage the trolley-wheel.

3. An improved trolley-harp having parallel arms, a wheel-shaft supported by said arms, and contacts having laterally-bent upper ends secured to the upper ends of said trolley-harp arms, the contacts extending down at each side of and adapted to engage the trolley-wheel.

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

CHARLES L. HOOPER.

Witnesses:

B. W. LEE,
M. A. KING.