

No. 670,556.

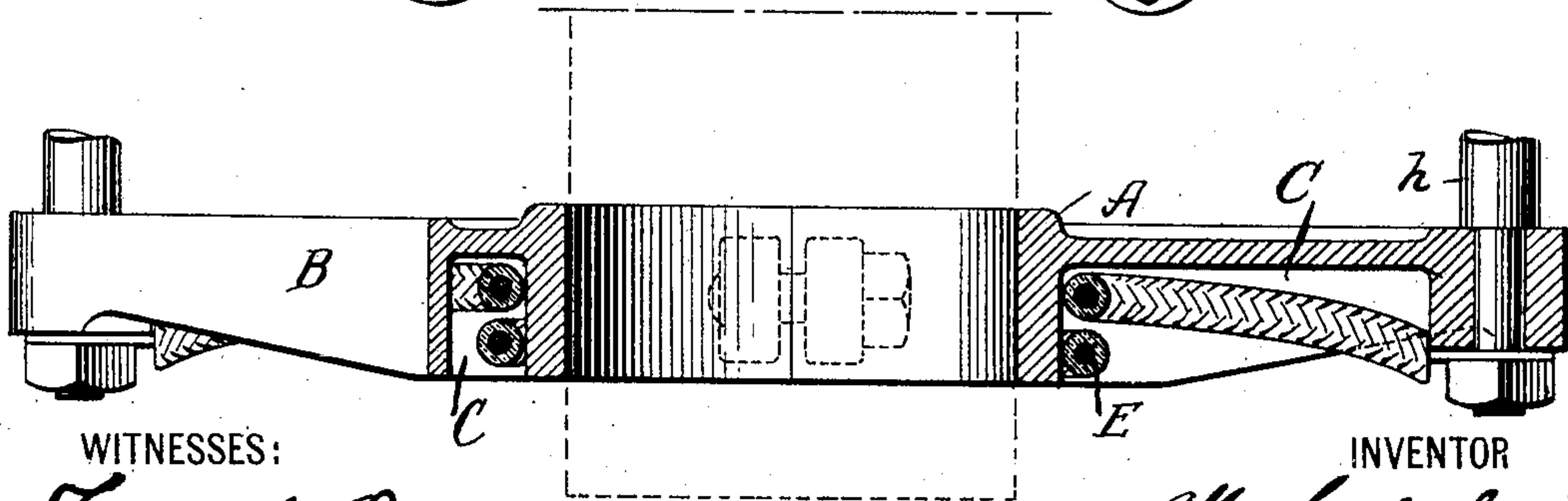
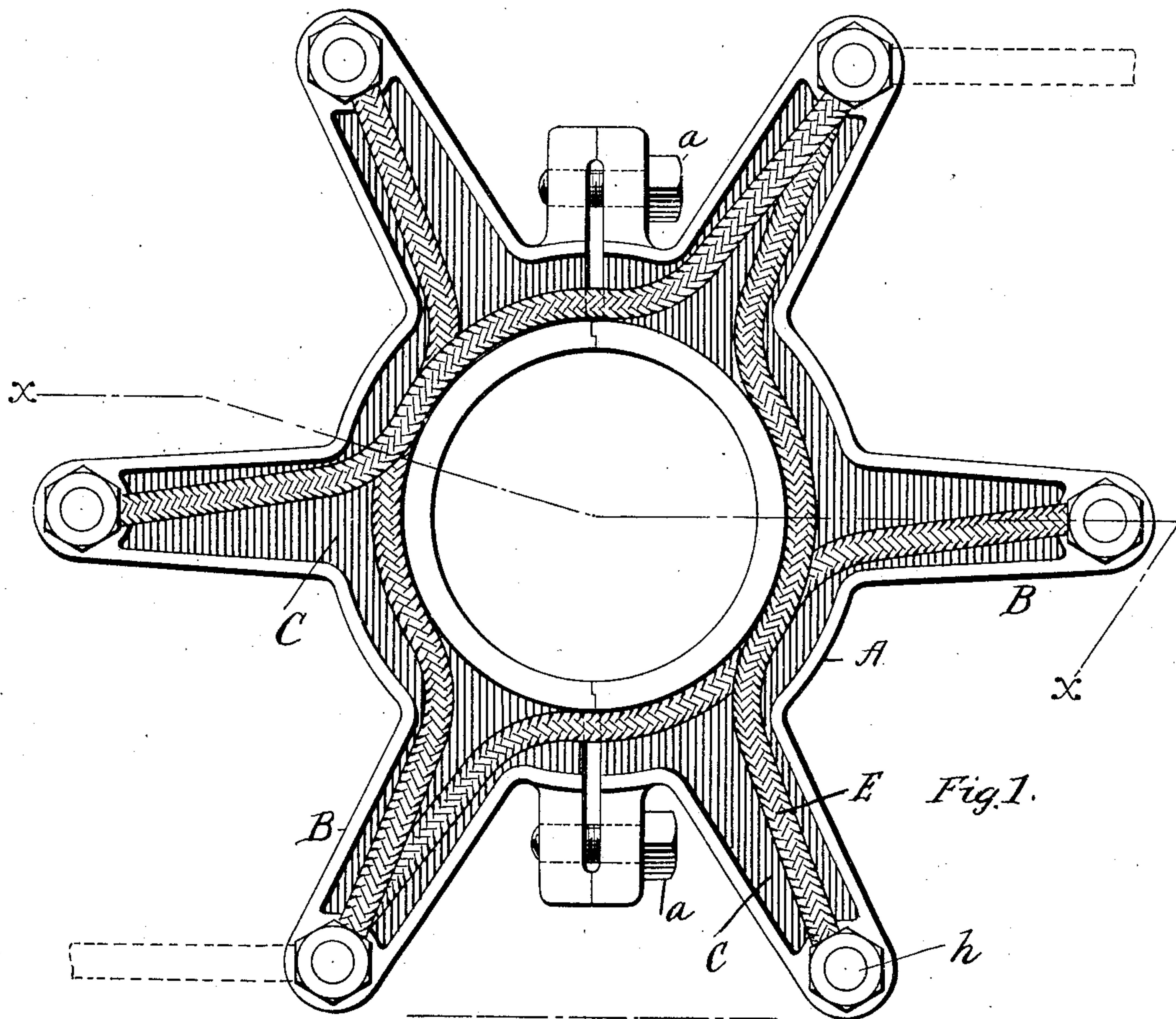
Patented Mar. 26, 1901.

A. COWPERTHWAIT.

ROCKER ARM.

(Application filed Feb. 4, 1901.)

(No Model.)



WITNESSES:

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Fig. 2.

INVENTOR

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ALLAN COWPERTHWAIT, OF BROOKLYN, NEW YORK, ASSIGNOR TO ALONZO B. SEE AND WALTER L. TYLER, OF SAME PLACE.

ROCKER-ARM.

SPECIFICATION forming part of Letters Patent No. 670,556, dated March 26, 1901.

Application filed February 4, 1901. Serial No. 45,827. (No model.)

To all whom it may concern:

Be it known that I, ALLAN COWPERTHWAIT, a citizen of the United States, residing at the city of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Rocker-Arms, of which the following is a full, clear, and exact description.

This invention relates to the brush-holder carriers or rocker-arms of dynamo-electric machines and motors. In the larger machinery of this class, where more than two commutator-brushes are used, it is customary to "cross-connect" the brushes into two groups, one of which is positive and the other negative, said groups being respectively connected with the main leads of the circuit. The conductors which serve to make the cross connections between the brush-holders are sometimes of large dimensions, making it difficult to dispose of them without interfering with other and adjacent parts of the machinery, with the consequent liability of injury to the conductors themselves. It has heretofore been customary to run said conductors, which are usually flexible, from one brush-holder freely through space to another holder, bending or kinking them in any convenient way to dispose of them in the least obtrusive manner.

It is the object of my invention to dispose of these cross-connecting conductors in such a manner as to render them almost invisible, and at all events to house or protect them against possible injury, while at the same time leaving them conveniently accessible for inspection or repair. I accomplish this object by providing a chamber or cavity in the brush-holder carrier, which chamber is open to be easy of access and in which are disposed the said cross-connecting conductors.

The further details of the invention will be hereinafter described.

In the accompanying drawings, Figure 1 is a face view of my improved brush-holder or rocker-arm, showing the disposition of the conductors therein according to my invention. Fig. 2 is a section thereof on line *xx* of Fig. 1.

The brush-holder carrier consists, as usual, of a spider or ring provided with radial arms, at the extremities of which the brush-holders are carried. In the drawings the ring is in-

dicated by A and the radial arms by B. The spider is preferably made in two parts, to be easily applied to the shaft adjacent to the commutator, the parts being secured together along a diametrical line by bolts *a*. The entire spider is cast or otherwise formed throughout with a channel, cavity, or chamber in one face (indicated by C) and consisting of an annular portion in the ring and branches leading therefrom to the extremities of the radial arms. The brush-holders are to be attached, as usual, by means of bolts *h* or otherwise to the extremities of the arms B.

The brush-holder carrier illustrated is adapted for six brushes, and they are to be connected together in groups of three, the alternate brushes being connected in each group. The cross-connecting conductors used for this purpose are indicated by E. Each one extends from a particular brush-holder at the extremity of one of the radial arms B to the next brush-holder but one and on the way is deflected into the cavity or chamber extending along both arms and part way around the ring. Only two conductors are necessary to connect three brush-holders in each group together, as shown, and all of the connecting conductors are located in the cavity or chamber of the brush-holder carrier, so that they are practically out of sight, are protected from injury, and occupy no valuable space adjacent to the commutator.

Having described my invention, I claim—

1. A brush-holder carrier for dynamo-electric machines and motors provided with a cavity or chamber for the purpose described, extending from the location of one brush-holder to that of another.

2. A brush-holder carrier for dynamo-electric machines and motors provided with an open channel extending from one brush-holder to another, in combination with conductors connecting said brush-holders together, and extending through said channel, substantially as described.

In witness whereof I subscribe my signature in presence of two witnesses.

ALLAN COWPERTHWAIT.

Witnesses:

WM. A. ROSENBAUM,
WALDO M. CHAPIN.