No. 686,023.

Patented Nov. 5, 1901.

C. W. J. BUSCH.

## ARMATURE FOR ELECTRIC METERS.

(Application filed July 30, 1901.)

(No Model.)

Fig. I.

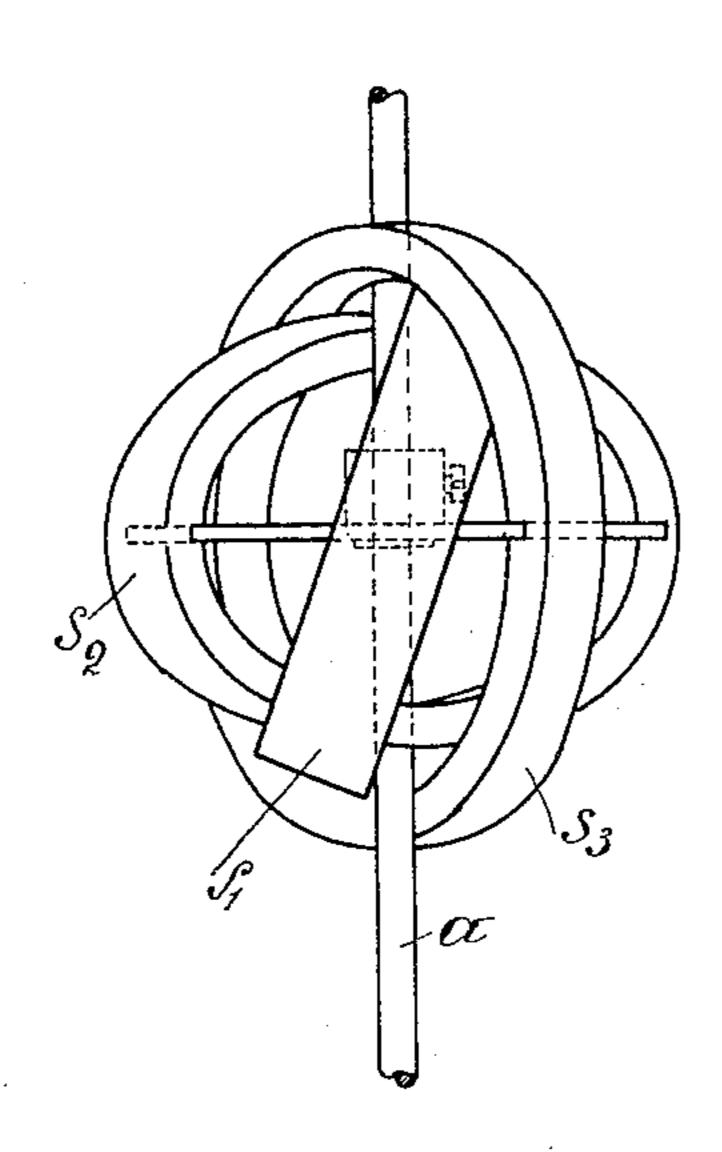
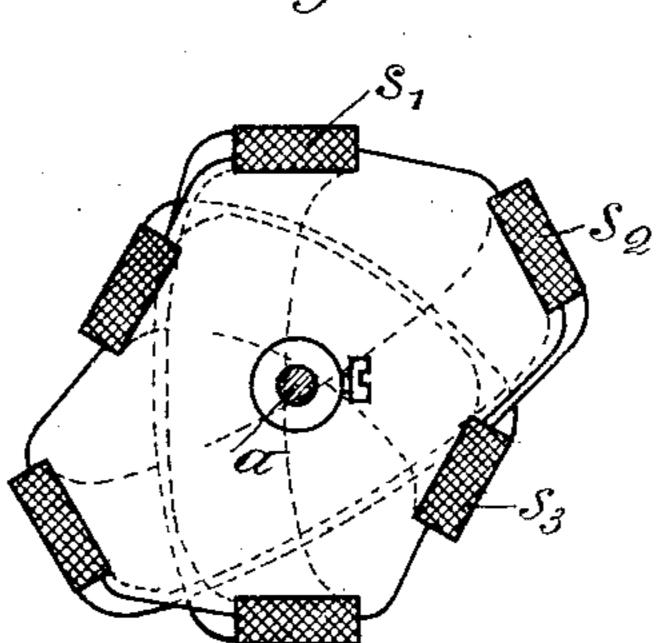


Fig. 2



Mitnesses: William Schulz. Edward Ray

Carl Wilhelme John Busch per Roeder & Briesen Ally

## United States Patent Office.

CARL WILHELM JOHN BUSCH, OF MUNICH, GERMANY, ASSIGNOR TO LUXSCHE INDUSTRIEWERKE, A. G., OF LUDWIGSHAFEN, GERMANY.

## ARMATURE FOR ELECTRIC METERS.

SPECIFICATION forming part of Letters Patent No. 686,023, dated November 5, 1901.

Application filed July 30, 1901. Serial No. 70,221. (No model.)

To all whom it may concern:

Be it known that I, CARL WILHELM JOHN BUSCH, a subject of the King of Prussia, Emperor of Germany, and a resident of Munich, Bavaria, German Empire, have invented certain new and useful Improvements in Armatures for Electric Meters, of which the following is a specification.

It is of great importance with armatures for electric meters, in virtue of the good merit and the safety of work as well as of manufacturing disbursement to diminish the number of coils and collector-segments to the lowest possible degree. Particularly with electric me-

required that each coil or each series of coils connected with each collecter-segment be located symmetrically to the axle, so as to obtain a proper rotative momentum and no strain whatever. By applying three collector-segments generally six coils allow of a symmetric arrangement.

The present invention has for its object to permit a symmetrical arrangement even with three coils, and this object is attained in such a manner that the coils are arranged to cross the axle. The axis of each coil is thus not perpendicular to the rotation-axle, but inclined. This is, however, of no consequence for the rotative momentum, and this momentum is of such a rate as if on each side of the axle half a coil were seated, the area of

which is equal to the projection of the inclined coil onto the axle.

The invention is illustrated in the accom- 35 panying drawings, in which—

Figure 1 shows a front view, and Fig. 2 a top view, of a section through the middle of the armature according to my invention.

In the drawings, a denotes the axle, and s', 40 s², and s³ the three coils. The axle is located between the field-magnets and is connected with a retarding device. (Not shown, as it is usual in motor electric meters of this kind.) Also the arrangement of the conductors and 45 of the collector-segments is not a part of the invention and is not illustrated.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim, and desire to secure by Letters Patent, is—

An armature for electric motor-meters composed of a number of coils arranged to cross one another and also to obliquely cross the armature-shaft, substantially as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing 60 witnesses.

CARL WILHELM JOHN BUSCH.

Witnesses:
ERNST WAGMÜLLER,
SIGMUND FALK.