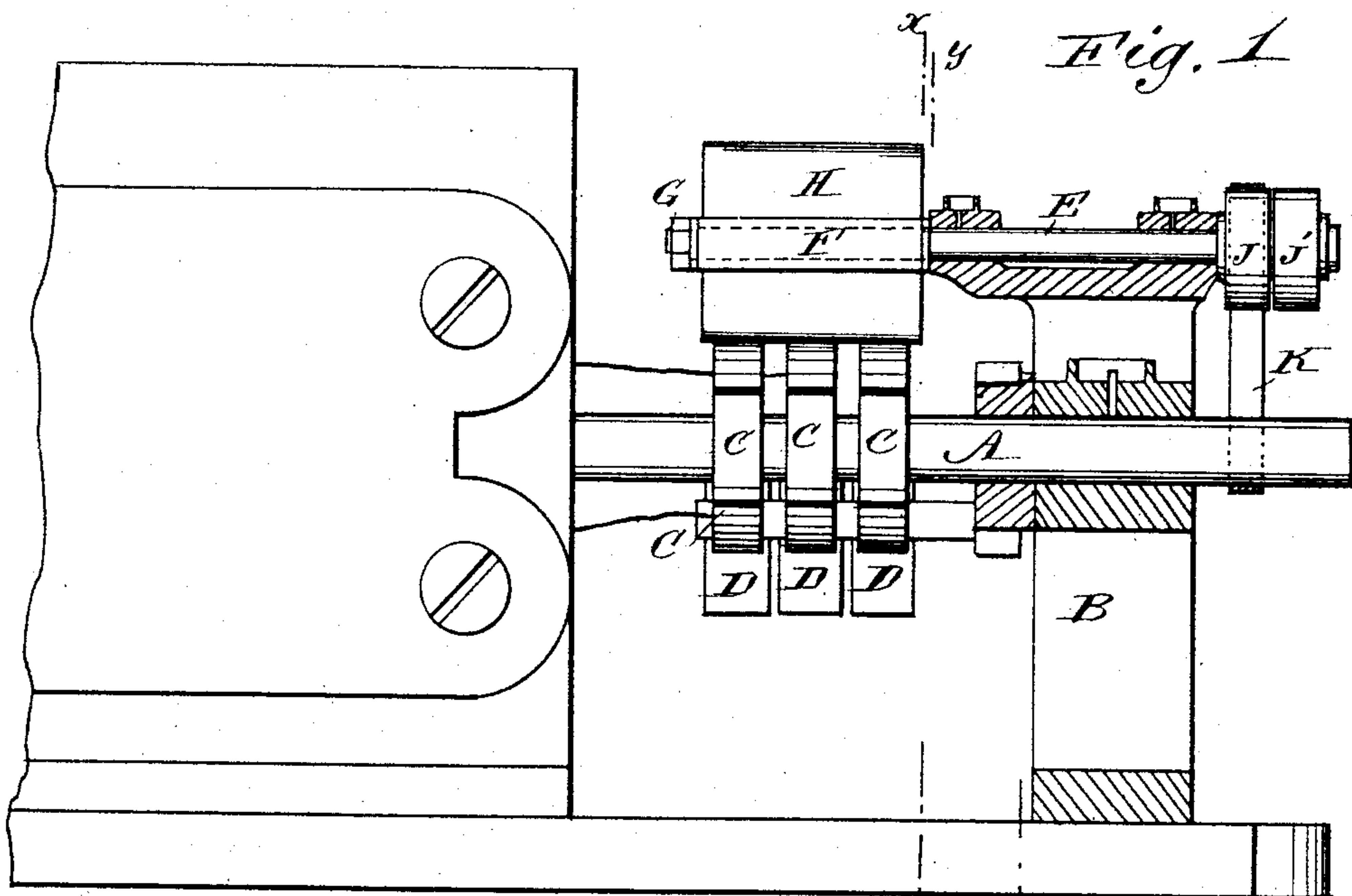


(No Model.)

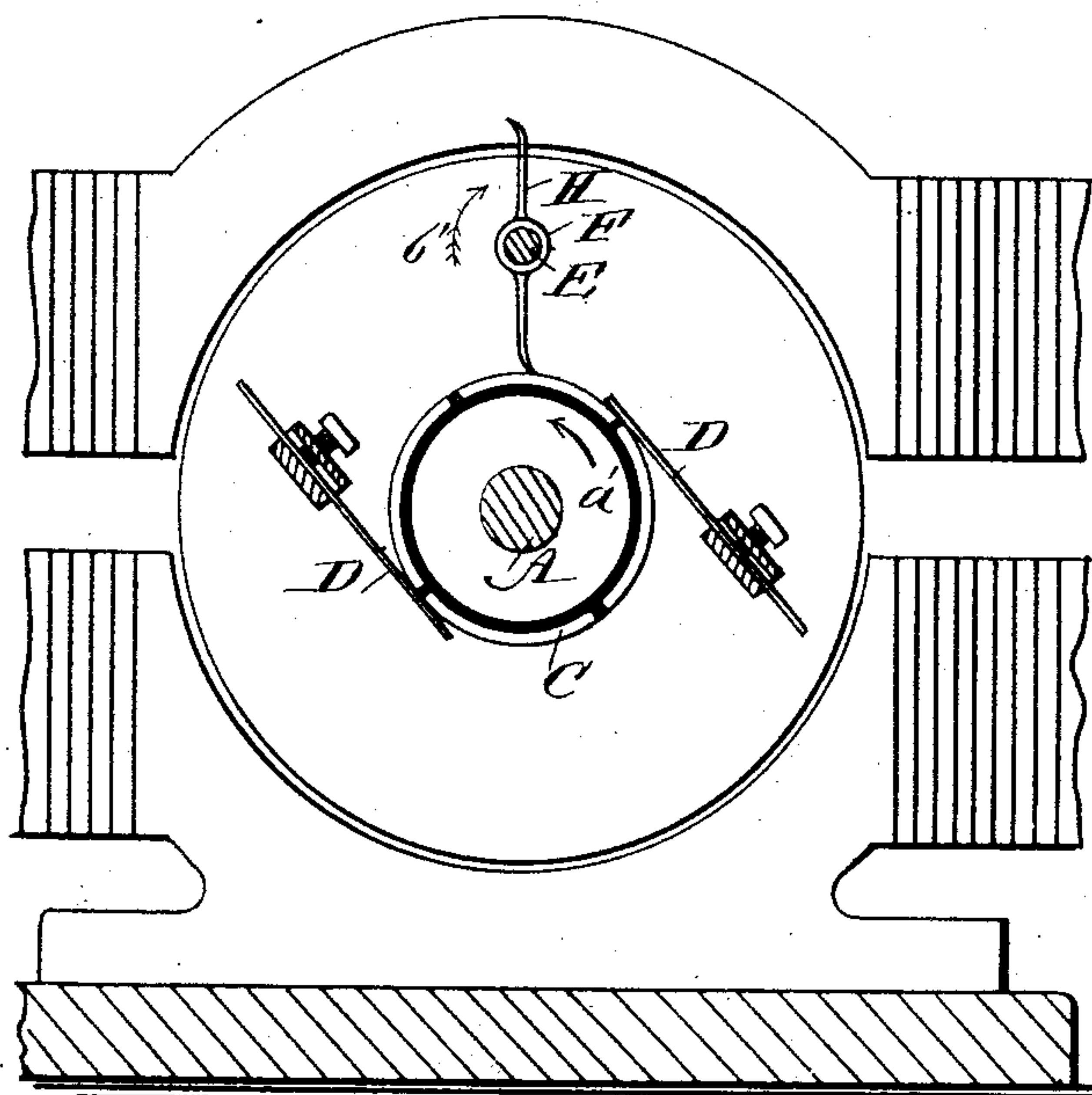
R. HOLBON.

WIPER FOR THE COMMUTATOR OF DYNAMO ELECTRIC MACHINES.  
No. 287,678.

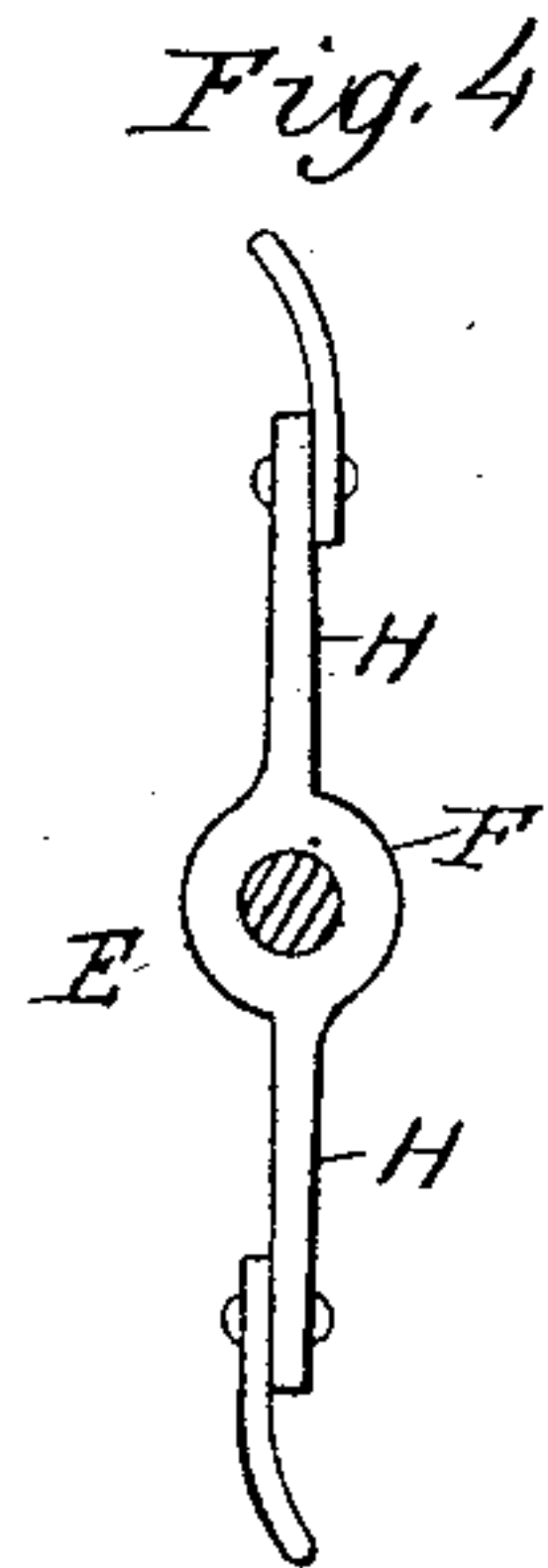
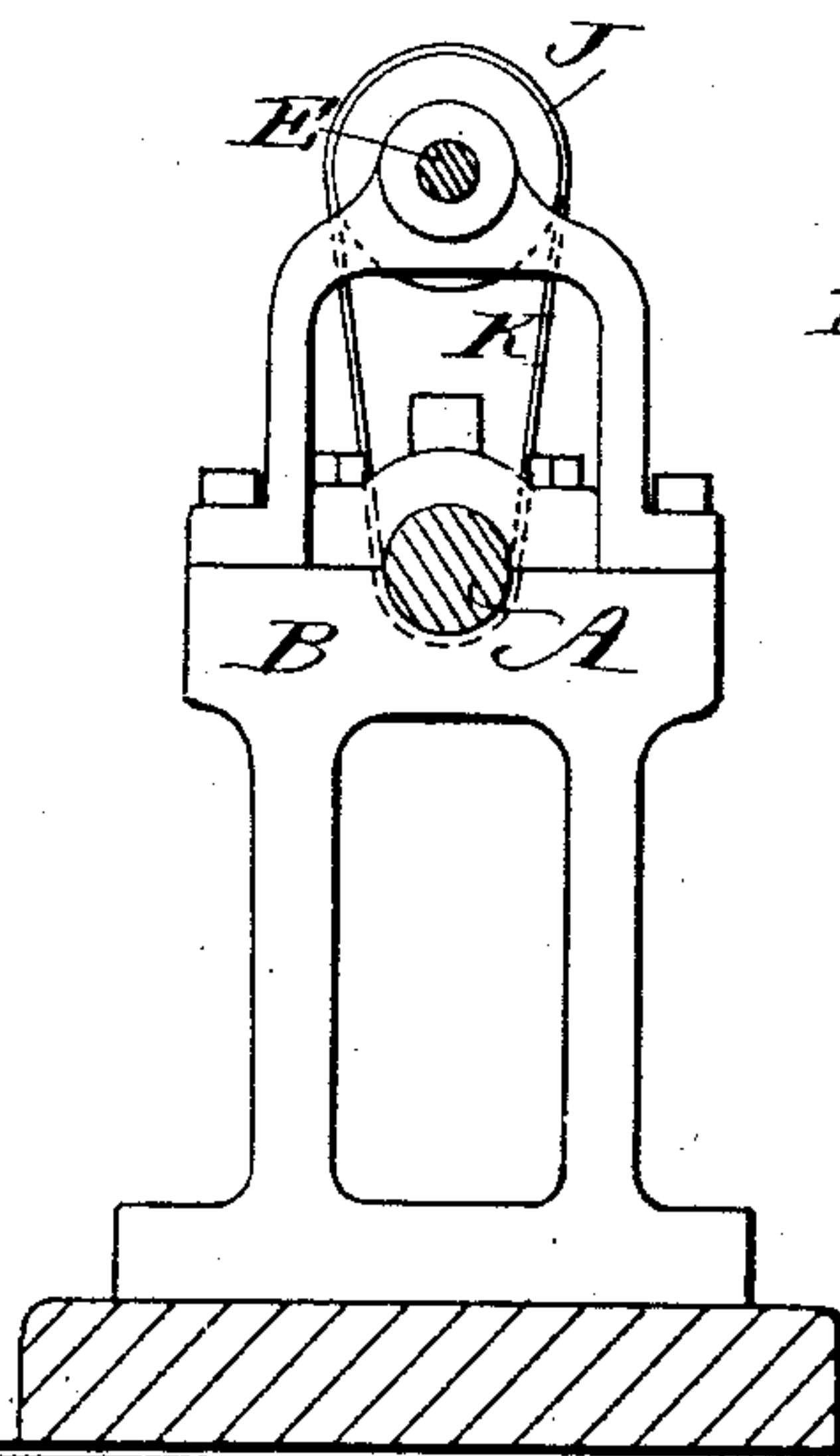
Patented Oct. 30, 1883.



*Fig. 2*



*Fig. 3*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ROBERT HOLBON, OF ALPENA, MICHIGAN, ASSIGNOR OF ONE-HALF TO  
CHARLES B. GREELY, OF SAME PLACE.

WIPER FOR THE COMMUTATORS OF DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 287,678, dated October 30, 1883.

Application filed January 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT HOLBON, of Alpena, in the county of Alpena and State of Michigan, have invented certain new and useful Improvements in Wipers for the Commutators of Dynamo-Electric Machines, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for wiping the commutators of dynamo-electric machines, to keep them clean and bright, so that there will be a perfect contact between the brushes and the commutator.

The invention consists in a rotary wiper so located in relation to the commutator that when the armature-shaft is revolved the said wiper will be revolved, and will wipe and polish the surface of the commutator, and thus insure a perfect contact between the commutator and the brushes.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of my improved wiper for commutators of dynamo-electric machines, showing the same applied to a dynamo-electric machine, parts of which are broken out and others shown in longitudinal section. Fig. 2 is a cross-sectional elevation on the line *x x*, Fig. 1. Fig. 3 is a cross-sectional elevation on the line *y y*, Fig. 1; and Fig. 4 is a detail of the wipers.

The armature-shaft A of a dynamo-electric machine is journaled in a standard, B, in the usual manner, and on the said shaft is mounted the commutator C, against which the brushes D rest, so that there will be a perfect contact between the brushes and the surface of the commutator. As it is desirable that the surface of the commutator shall always be kept bright and clean, I have provided a wiper, which I will now describe.

A shaft, E, is journaled in the top of the standard B, parallel with the shaft A, and on that part of the shaft E above the commutator C a tubular or cylindrical casing, F, is rigidly mounted, and held in place by a nut, G. To the said cylindrical casing F one,

two, or more wings, H, are attached, which are of such length that their free ends can come in contact with the cylinder-surface of the commutator C. The wings may consist of strips of flexible material, as shown in Fig. 2, or plates, in the outer edges of which the strips of wiping material are held by means of set-screws or other suitable devices, as shown in Fig. 4. The length of the wings is to be equal to or slightly greater than that of the commutator. On that end of the shaft E opposite the one on which the cylindrical casing is mounted a fixed and a loose pulley, J J', are mounted, over which a belt, K, passes, which also passes around the shaft A. If the shaft A is rotated in the direction of the arrow *a'*, the belt K will rotate the shaft E in the direction of the arrow *b'*, and the wings H on the cylinder or cylindrical casing F will be rotated in the same direction, and the edges will come in contact with the surface of the commutator, and will wipe, clean, and polish the same, thus insuring a perfect contact with the brushes D.

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

1. The combination, with the commutator of a dynamo-electric machine, of a revolving wiper for cleaning and polishing the surface of the commutator, substantially as herein shown and described, and for the purpose set forth.

2. The combination, with the commutator of a dynamo-electric machine, of a revolving wiper for cleaning and polishing the surface of the commutator, and of devices for operating the wiper from the commutator-shaft of a dynamo-electric machine, substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the commutator of a dynamo-electric machine, of the shaft E, journaled above and parallel with the armature-shaft, wings mounted on that end of the shaft E above the commutator, and pulleys and a belt for operating the shaft E from the commutator-shaft, substantially as herein shown and described, and for the purpose set forth.

4. In a dynamo-electric machine, the combination, with the shaft A and the commutator C, mounted thereon, of the shaft E, journaled above and parallel to the shaft A, the  
5 casing F on the shaft E, the wiper-wings H on the casing F, the pulleys J J' on the shaft E, and the belt K, passing around one of the pul-

leys J J' and around the shaft A, substantially as herein shown and described, and for the purpose set forth.

ROBERT HOLBON.

Witnesses:

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