

F. A. MERRICK.
ELECTRIC RAILWAY MOTOR.

(Application filed Aug. 21, 1900.)

(No Model.)

2 Sheets—Sheet 1.

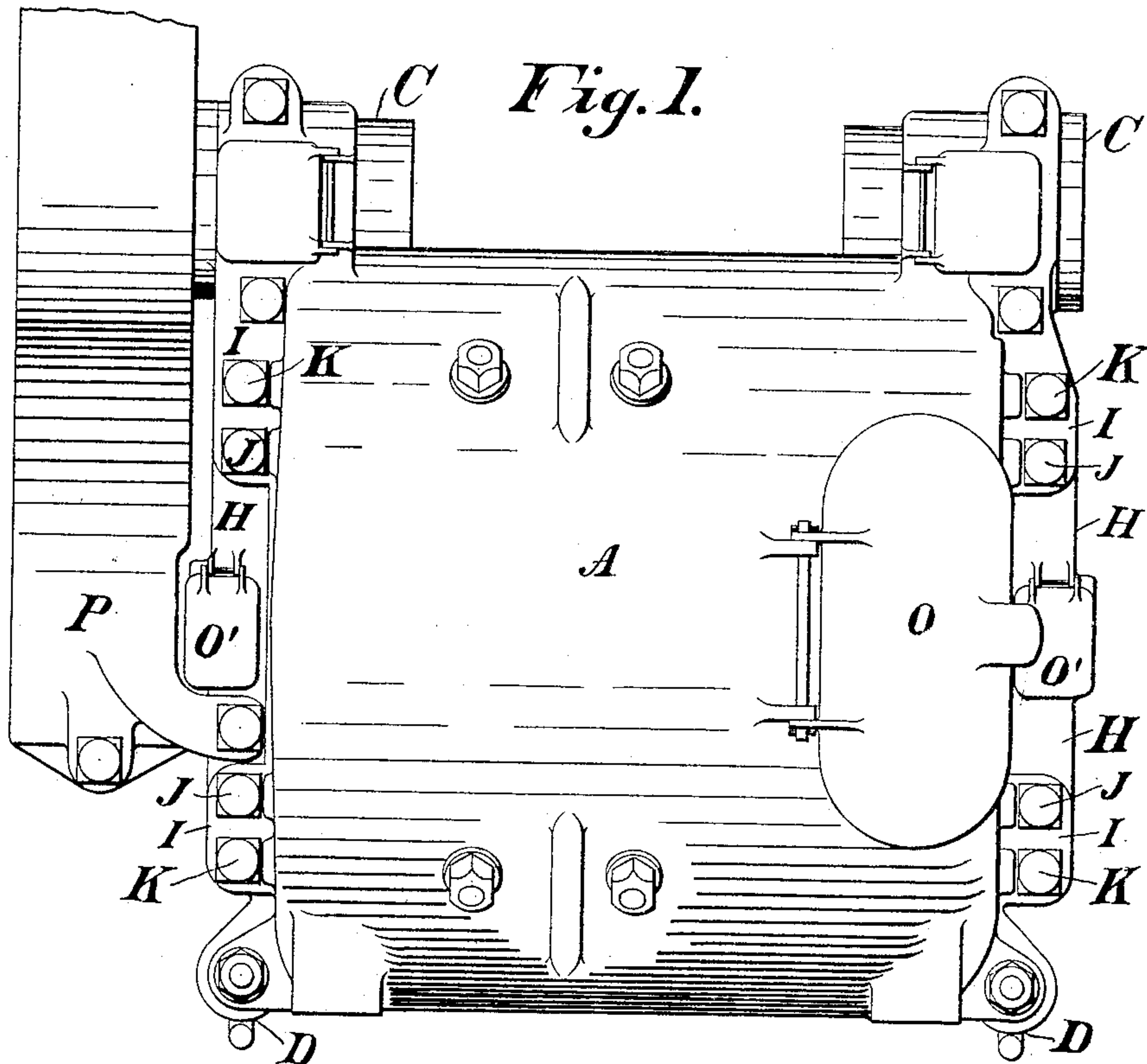
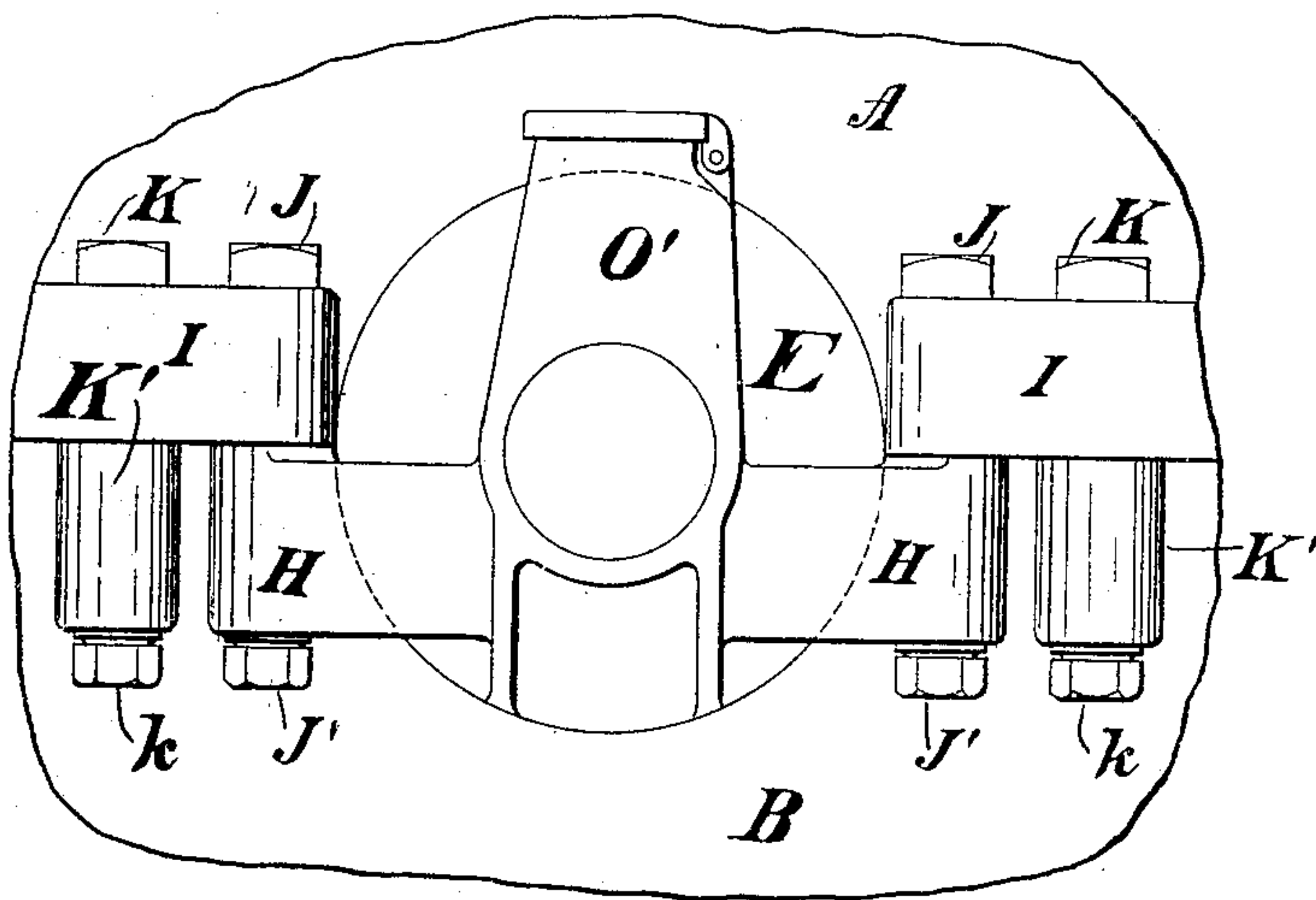


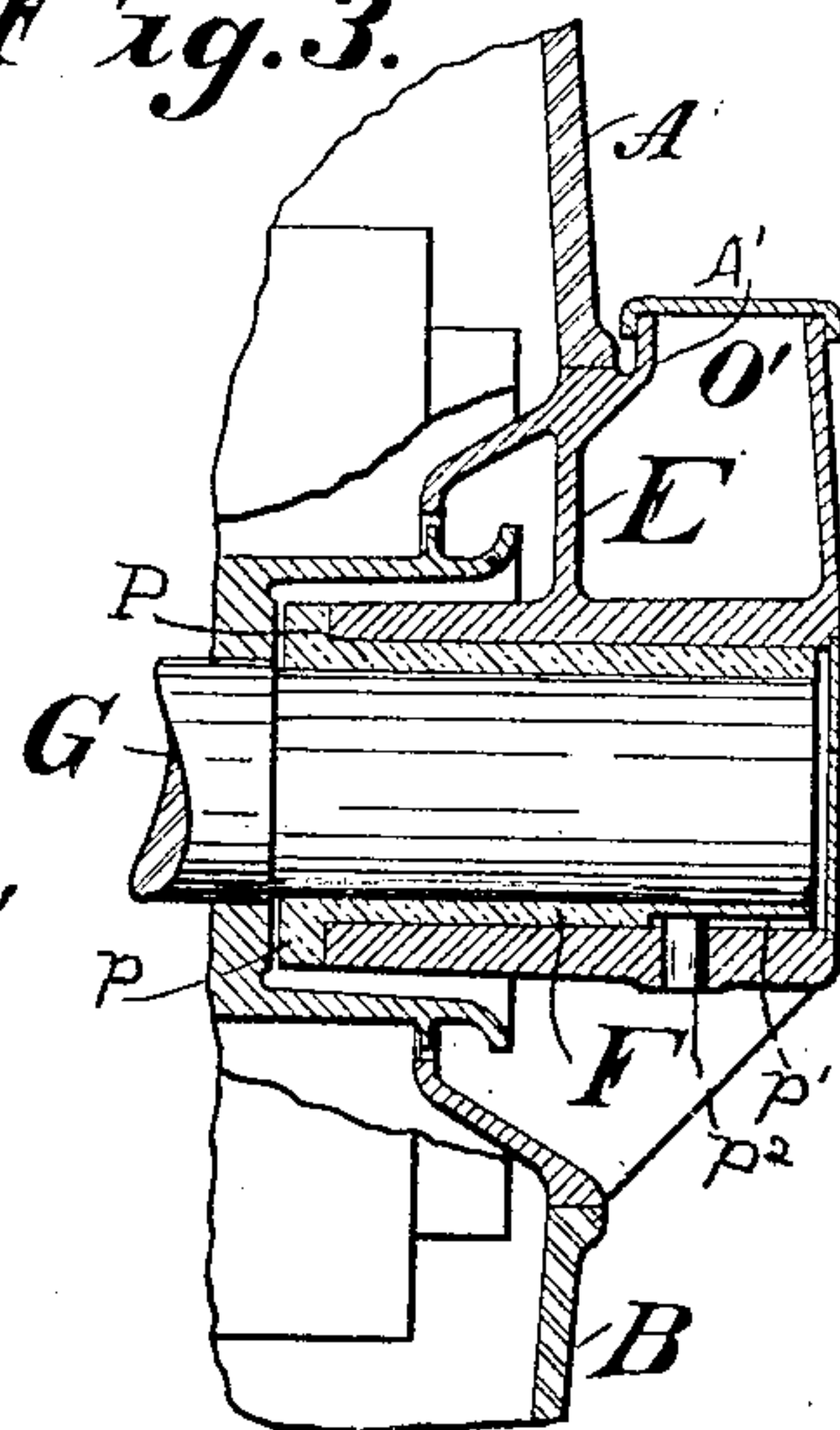
Fig. 2.



WITNESSES:

L. M. Powell,
Blanche M. Smith.

Fig. 3.



INVENTOR

Frank A. Merrick

BY
Geo. H. Parmelee,
his ATTORNEY.

No. 672,952.

Patented Apr. 30, 1901.

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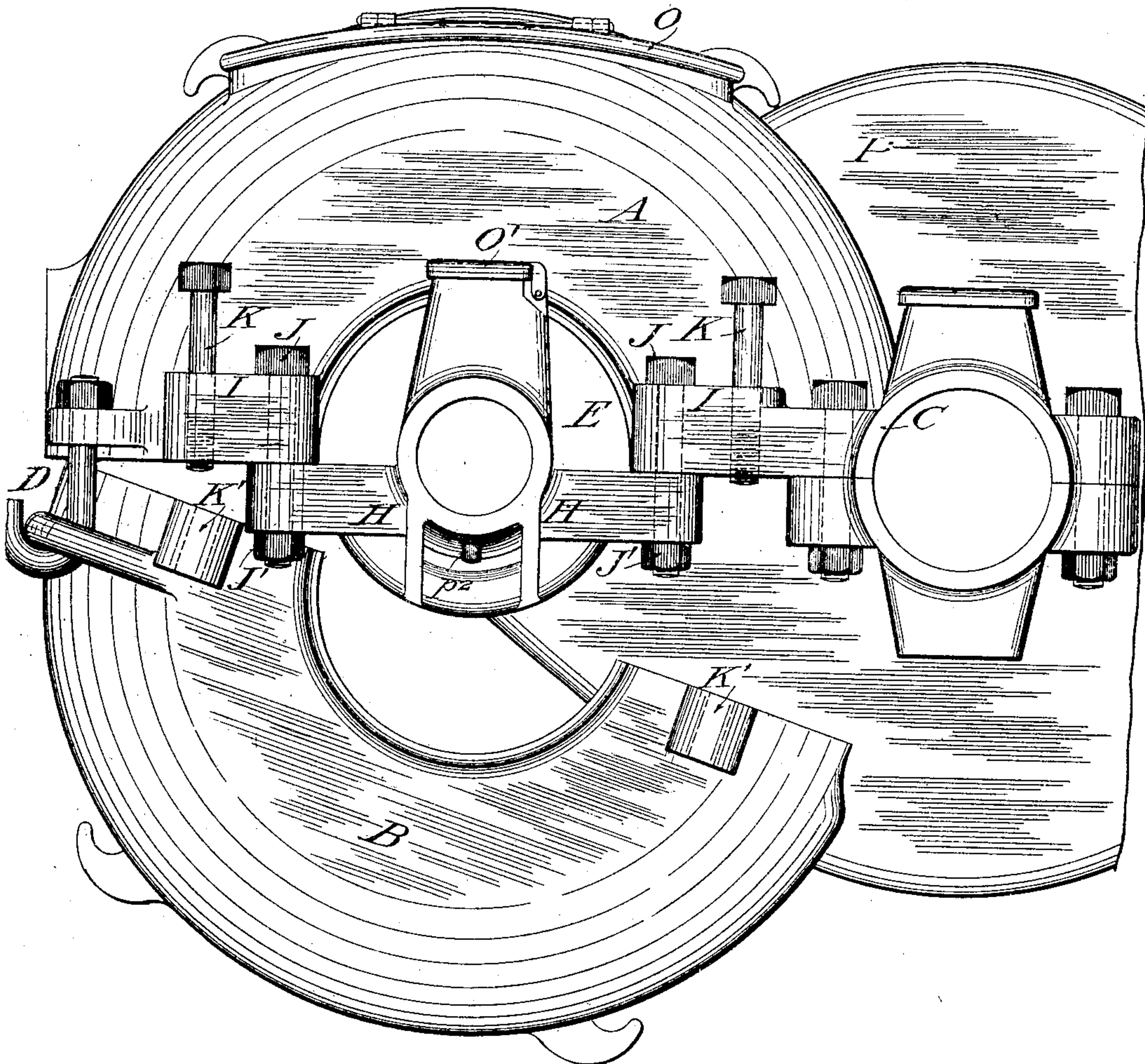


Fig. 4.

WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK A. MERRICK, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
LORAIN STEEL COMPANY, OF PENNSYLVANIA.

ELECTRIC RAILWAY-MOTOR.

SPECIFICATION forming part of Letters Patent No. 672,952, dated April 30, 1901.

Application filed August 21, 1900. Serial No. 27,566. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. MERRICK, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Electric Railway-Motors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to electric railway-motors, and more particularly to the sectional frame construction thereof.

One object of my invention is to provide simple and efficient means for securing together the different parts of the frame in a manner to permit the bottom section to be readily dropped away from the armature when desired and also to permit the armature to be entirely removed from the frame without detaching the motor from the car-truck.

A further object is to provide simple and efficient means for securing in place the armature-shaft bearings.

I accomplish these objects by the novel construction and combination of parts hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings.

In the drawings, Figure 1 is a top plan view of a railway-motor embodying my invention. Fig. 2 is a partial end view of the same, and Fig. 3 is a detail sectional view showing one of the armature-shaft bearings. Fig. 4 is an end view showing the lower section of the motor-frame partially dropped on its hinges.

The letter A designates the upper section of the frame, and B the lower section thereof, the line of division of said sections being horizontal and in the plane of the axis of the armature. These sections are provided with the usual sleeving-lugs C and are connected by suitable hinges D. The sections A and B are each semicircularly cut away at their end portions to seat circular bearing-supports E, in which are seated the bearings F for the armature-shaft G. The bearing-supports E are each formed with laterally-extending arms or lugs H, which extend underneath lugs or projections I on the upper frame-section A and to which they are secured by short bolts J, whose lower ends are secured by nuts J'.

The lugs I also form seats for bolts K, which also engage lugs K' on the lower frame-section B and are secured by nuts k, which hold the frame-sections A and B together.

P designates the usual gear-casing, secured to the upper frame-section. O is the usual door in the said section, and O' are lubricant-reservoirs.

When it is desired to drop the lower frame-section on the hinges D, the bolts K are removed, which permits said section to swing down on the hinges away from the armature, which is retained in the upper section by the bolts J. By removing these bolts the armature may be entirely removed from the frame.

P' designates one of the bearing-sleeves for the armature-shaft, said sleeve being supported on the end portion A' of the frame. This sleeve is formed with a flange p at its inner end, which seats against the end of the inwardly-projecting sleeve-support A'. The flange p holds the sleeve against outward endwise displacement. Said sleeve also has a groove p', which is engaged by a pin or stud p'', which holds the sleeve against any tendency to rotate. The sleeves must of course be seated from the inside of the frame in assembling the parts.

I do not limit myself to the exact construction and arrangement herein shown and described, as slight mechanical changes may be made without departing from the spirit and scope of my invention.

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

1. A motor-frame formed in two sections, bearing-supports seated in the ends of said sections, and having laterally-extending arms or projections, and bolts seated in the upper frame-section and engaging the said arms or projections.

2. A motor-frame formed in two main sections, connected by hinges at one edge, bolts for holding said sections together, bearing-supporting members seated in cut-away portions of the said sections and having laterally-extending arms or projections, and bolts seated in the upper frame-section and engaging said arms or projections, with nuts securing the lower ends of the said bolts.

3. In an electric motor, the combination with the frame, provided with bearing-supporting portions at its ends, of shaft-bearing sleeves seated in said supports and having
5 flanges at their inner ends which engage the inner ends of the said supports to prevent endwise displacement of said sleeves, together with means engaging said sleeves to prevent rotary movement thereof.
- 10 4. In an electric motor, the combination with the frame, provided with bearing-supporting portions at its ends, of shaft-bearing sleeves seated in said supports and having flanges at their inner ends which engage the inner ends of the said supports to prevent
15 endwise displacement of said sleeves, together with pins or studs engaging grooves in said sleeves to prevent rotary movement thereof.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRANK A. MERRICK.

Witnesses:

B. M. SMITH,
H. W. SMITH.