No. 774,077. PATENTED NOV. 1, 1904.

G. E. JACOBSON & C. ANDERSON.

MOTOR CASING.

APPLICATION FILED JULY 25, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

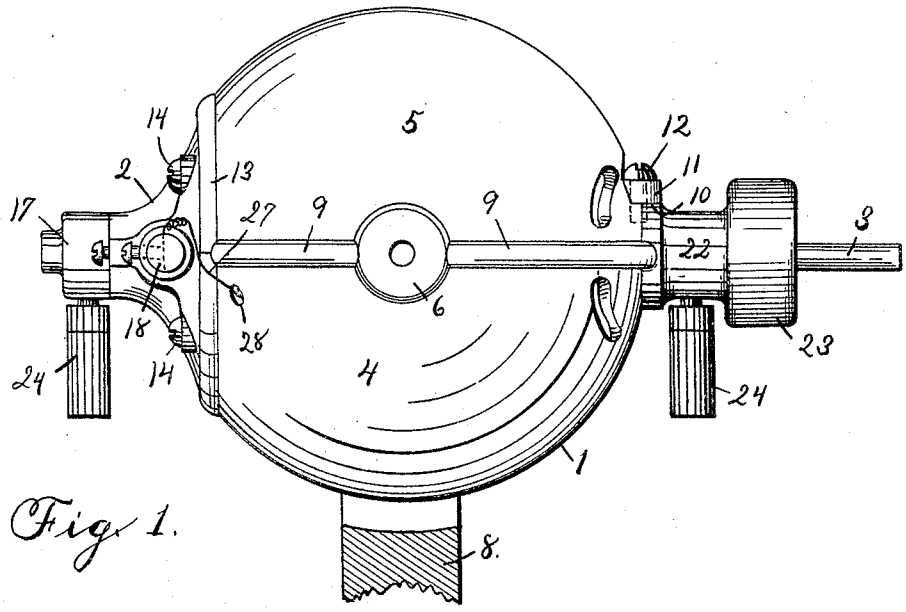
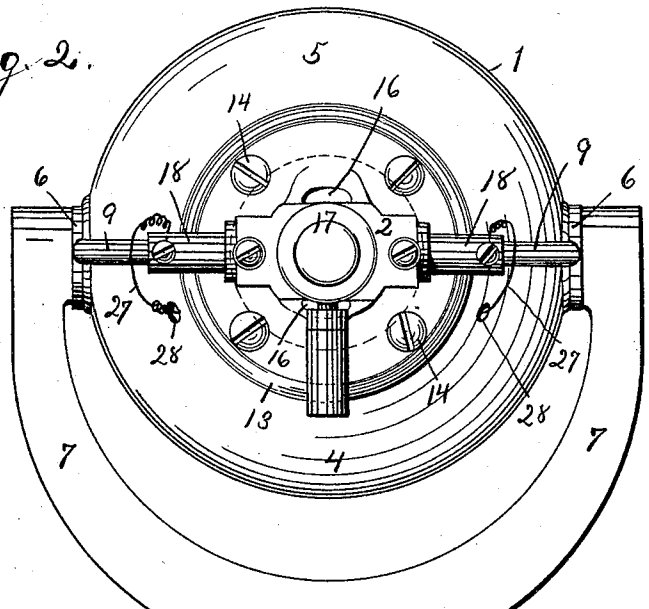


Fig. 1.

Fig. 2.



WITNESSES:

Drury Krug

Russell M. Everett

INVENTORS

Gustav E. Jacobson

Charles Anderson

BY

Charles H. Sell

ATTORNEY

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NO MODEL. 2 SHEETS—SHEET 2.

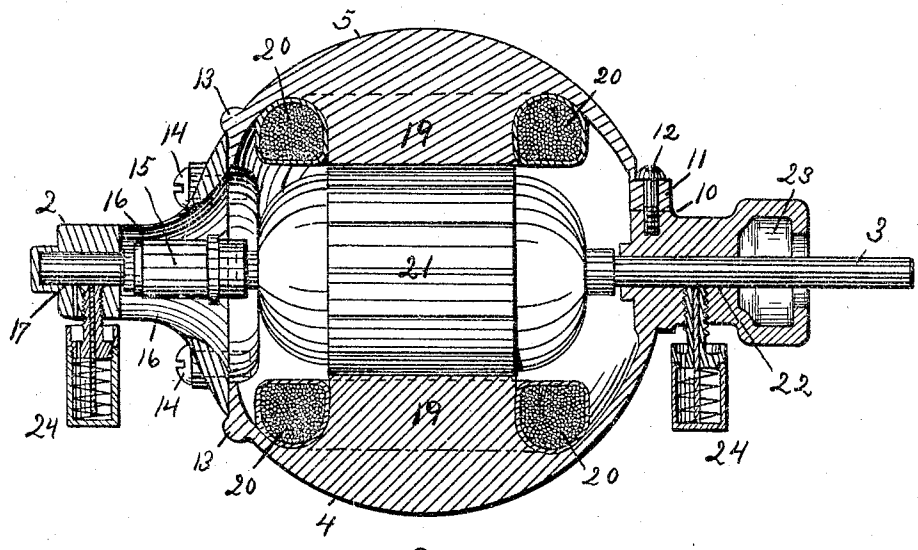

Fig. 3.

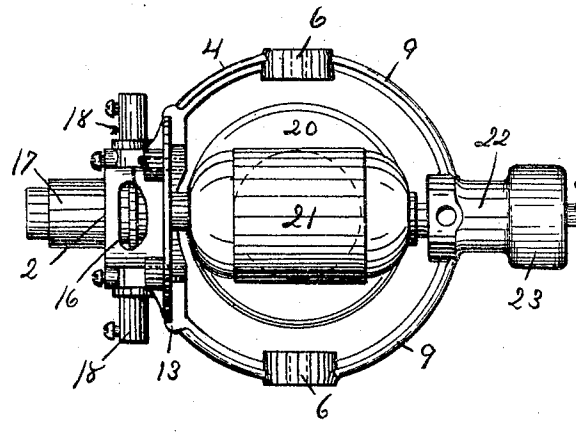

Fig. 4.

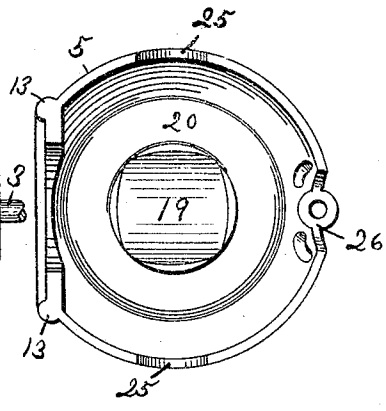

Fig. 5.

WITNESSES:

Ralph Lancaster

Russell M. Everett.

INVENTORS

Gustav E. Jacobson

Charls Anderson

BY

Charles H. Sell

ATTORNEY

No. 774,077. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

GUSTAV E. JACOBSON AND CHARLS ANDERSON, OF NEWARK, NEW JERSEY, ASSIGNORS TO THE ESSEX ELECTRICAL COMPANY, A CORPORATION OF NEW JERSEY.

MOTOR-CASING.

SPECIFICATION forming part of Letters Patent No. 774,077, dated November 1, 1904.

Application filed July 25, 1904. Serial No. 217,964. (No model.)

To all whom it may concern:

Be it known that we, GUSTAV E. JACOBSON, a subject of the King of Sweden and Norway, and CHARLS ANDERSON, a citizen of the United States, both residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Motor-Casings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

The objects of this invention are to provide an electric motor-casing of improved construction and one which shall be particularly adapted for use in connection with electric fans, to secure compactness and a neat and pleasing appearance, to facilitate adjustment of the motor to bring the fan into any desired position, and to obtain other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved motor-casing and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like figures of reference indicate corresponding parts in each of the several figures, Figure 1 is a side elevation of our improved motor-casing looking in the direction of the supporting-axis and with the supporting-bracket shown in section. Fig. 2 is a rear end elevation of the motor looking in the direction of the shaft thereof. Fig. 3 is a central section of the motor taken longitudinally of the armature-shaft. Fig. 4 is a plan of the motor with the upper half of the casing removed, and Fig. 5 shows said upper half of the casing in reverse plan.

In said drawings, 1 indicates our improved motor-casing, which is substantially spherical in form and cast in three pieces. One of said pieces, 2, and which we will designate as the "end" piece, is formed as by cutting off a segment of the sphere by a plane at right angles to the armature-axis 3, thus forming a zone of one base. The other two pieces, 4 and 5, respectively, are formed by cutting the remainder of the body portion upon a plane passing through the armature-axis and at right angles to the end piece 2, above described. The lower hemispherical piece 4 provides at its opposite upper edges bearings 6 6 for the supporting-pivots of the motor-casing and by which it is mounted between the arms 7 7 of a forked support 8. Said lower section 4 also provides a bead or flange 9 to overlap the edge of the upper section 5, and, furthermore, provides at one end a seat 10 to receive an ear 11 of the upper section, so that the two may be secured together, as by a screw 12. The two hemispherical sections 4 5 also provide a bead or flange 13 to overlap the edges of the end section where it meets them, being secured thereto by screws 14. Said end section provides a chamber for the commutator 15 of the motor-shaft, being apertured above and below, as at 16 16, to permit observation of the same. The outer end of the end section 2 provides a bearing 17 for the motor-shaft, and at the sides of said end section between the apertures 16 16 brushes 18 18 of any suitable construction are applied.

Each hemispherical section 4 or 5 is provided interiorly and centrally with a projection 19, around which the wire 20 is wound to form the field-magnets, and the armature 21 is arranged upon the shaft 3 between said field-magnets. At the opposite end of the casing from the end section 2 the lower hemispherical section 4 provides a bearing 22 for the motor-shaft and outside the same an annular chamber 23 to receive waste oil, the shaft projecting therefrom to receive a fan, as is common in the art. Oil-cups 24, of any suitable and well-known type, may be applied to the under side of the bearings provided by the motor-casing for the shaft 3.

The upper hemispherical section 5, it will be understood, is recessed at its edges, as at

25 25, to receive the pivotal bearings 6 6, and at its rounded end or end opposite the end section 2, as at 26, to receive the shaft-bearing 22. Circuit-wires 27 then connect the different motor parts in any well-known manner, said wires being passed through holes 28 in the motor-casing wherever necessary.

Having thus described the invention, what we claim as new is—

1. A motor-casing substantially spherical in form and comprising upper and lower approximately hemispherical sections having truncated ends and each adapted to carry interiorly a field-magnet, one of said sections providing a bearing for a motor-shaft, and an end section applied to the truncated ends of said upper and lower sections and providing a bearing for the shaft.

2. A motor-casing comprising upper and lower approximately hemispherical sections truncated at one end in a plane perpendicular to the line of division between the sections, the lower section providing bearings for pivotal supports and another bearing for the motor-shaft, an end section applied to the truncated ends of said upper and lower sections and providing a bearing for said shaft and mountings for commutator and brushes.

3. In a motor-casing, two approximately hemispherical sections truncated at one end and each adapted to carry interiorly a field-magnet, bearings upon one of said sections for pivotal supports, and one of said sections providing a bearing for the armature-shaft, an end section fitting the truncated ends of said approximately hemispherical sections and having a bearing for the armature-shaft and means for securing said sections together.

In testimony that we claim the foregoing we have hereunto set our hands this 23d day of July, 1904.

GUSTAV E. JACOBSON.
CHARLS ANDERSON.

Witnesses:
RALPH LANCASTER,
RUSSELL M. EVERETT.