

THE WENSTROM DYNAMO AND MOTOR.

The principal features of the Wenstrom and the advantages claimed for it by the manufacturers are:

(1) The iron clad field magnets, in which the magnetizing coils are surrounded by iron in every possible direction, so that the iron core may collect all of the exciting force, radiated from

interruption from external injury, and there is no risk in transportation or handling.

All parts of the dynamo are easily accessible. There is no loss of external magnetism into the surrounding air, as shown by the utter failure to attract or magnetize bits of iron in proximity to or in the vicinity of the machine; consequently, no magnetizing

of watches or other delicate instruments when brought near it. For marine lighting this is regarded as an especially valuable feature, as it means no deflection of the compass, on account of the electric lighting plant. Heating is said to be avoided in the use of this machine, consequently a saving of otherwise wasted power, and endangering of insulation or stopping of the machine from such cause. By means of a perfect automatic regulation, it is claimed that any number of lamps less than the full load of the dynamo can be run with approximately the same economy of power per lamp, and any changes of the number

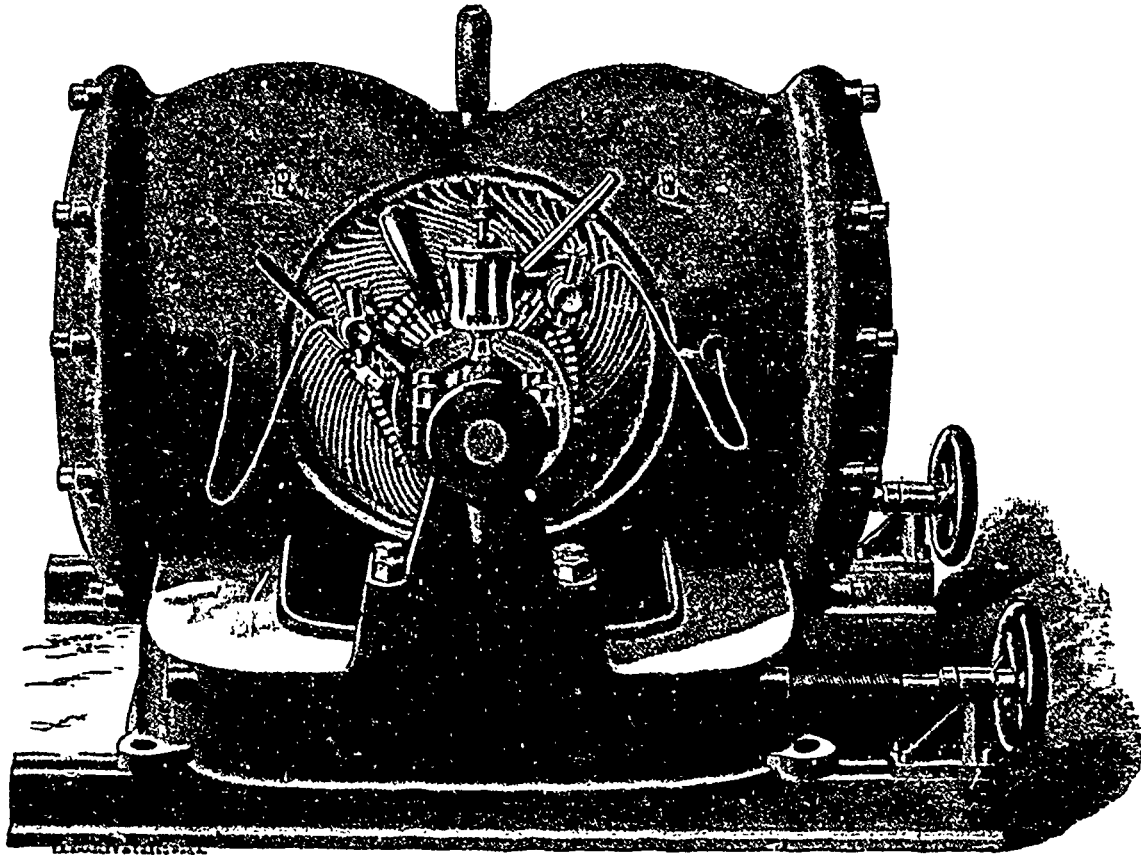


FIG. 1.—THE WENSTROM GENERATOR, (SIDE VIEW) SHOWING BRUSHES AND ARMATURE IN POSITION.

the coils, even that part which is usually dissipated in the surroundings. It follows from this arrangement that the exciting power is less in this machine, all other things being equal, because the power here is better utilized.

(2) The buried wire in the armature. In the Wenstrom the conductors are buried in grooves, or laced through holes transversely in the periphery of the armature, the distance between the pole piece and core being limited only to that small space required for the safe revolving of the armature. (See fig. 1.) The resistance of the magnetic circuit is by this means reduced in a high degree, and the magnetizing power used for creating the necessary magnetism in the armature is also decreased, thereby effecting a saving of power.

(3) Highest efficiency, in other words, the largest amount of light (or candle power of lamps) obtainable with the least amount of power received from the engine.

(4) Economy of operation.

(5) No sparking.

The base, cast solid with the body, is broad and long, giving a firm bed to the machine. The shaft is of steel, ground on dead centres and runs in composition—self oiling bearings, insuring perfect lubrication and reduced wear. The commutator is composed of massive copper bars, does not heat, and never needs renewal. Its covered structure precludes the possibility of an

number of lamps burning can be made with perfect safety to the lamps and dynamo without requiring the attention of an attendant at the machine, and with the Wenstrom system lamps of various candle power can be used from the same circuit at the same time. The thoroughly insulated character of the dynamo, together with the low voltage used, is said to render the Wenstrom system especially desirable and safe for house, hotel

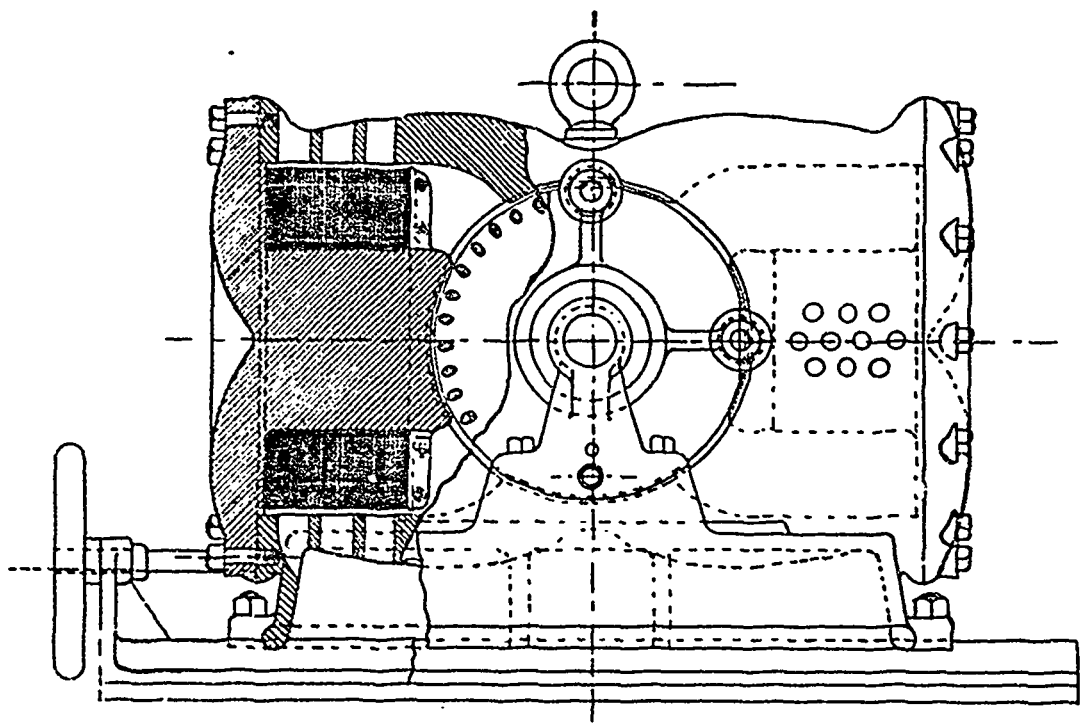


FIG. 2.—THE WENSTROM FOUR POLE GENERATOR (SECTIONAL SIDE VIEW) SHOWING FIELD COILS, POLE PIECES, ETC.

or other lighting service.

After a series of careful tests of the Wenstrom, Professor Kapp, the celebrated German electrician, writes of this machine as follows. "The Wenstrom possesses many novel and