Sept. 13, 1927. 1,642,448

H. W. LAVIGNE

SUPERADJUSTABLE GENERATOR

Original Filed Jan. 30, 1925 2 Sheets-Sheet 1

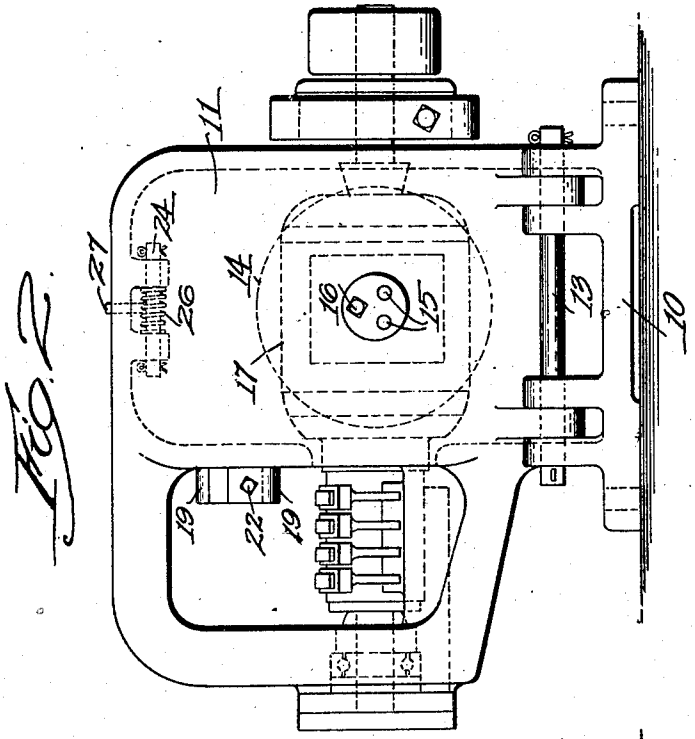


Fig. 2.

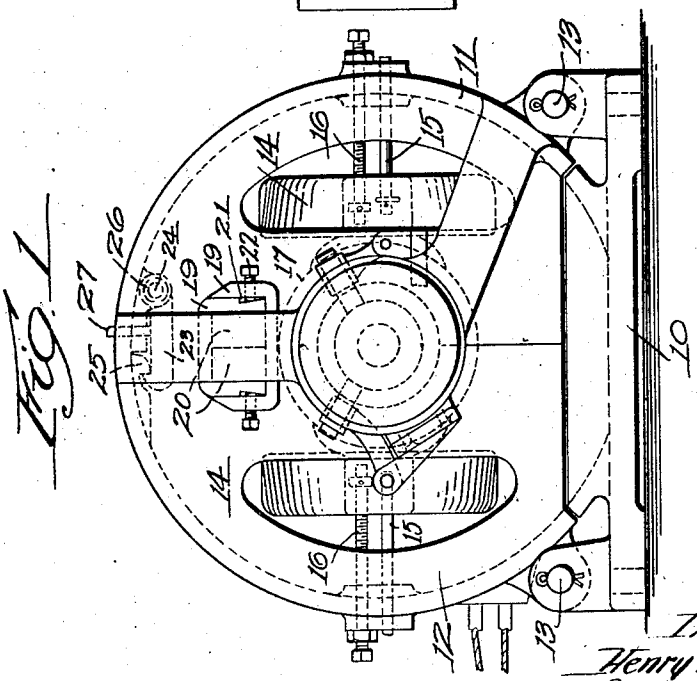


Fig. 1.

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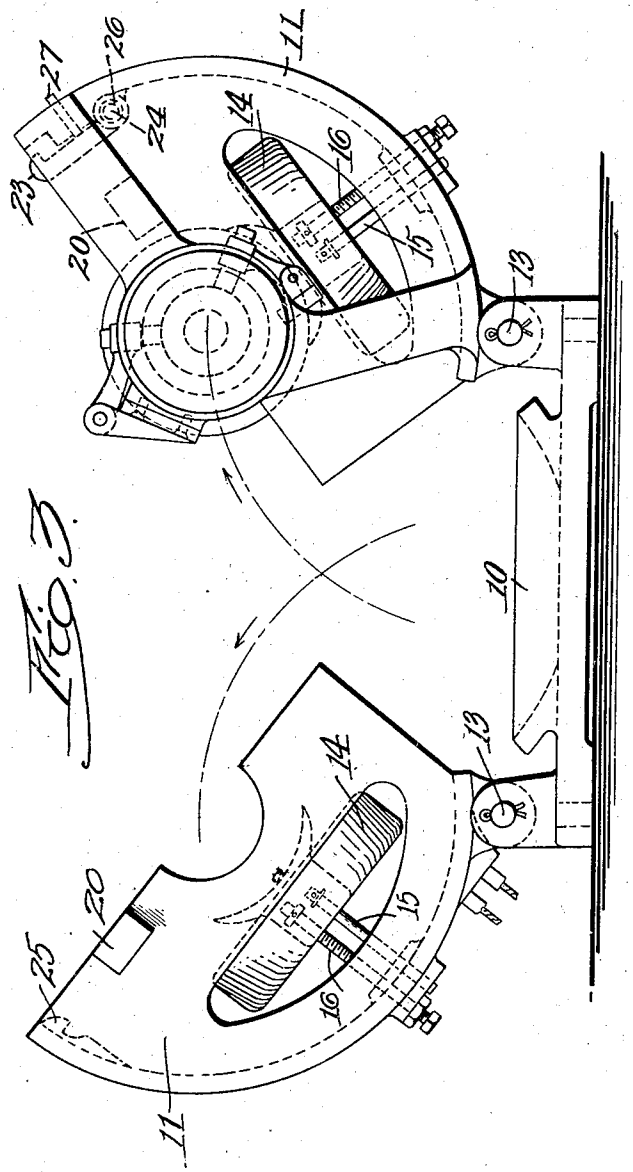


Fig. 2.

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UNITED STATES PATENT OFFICE.

HENRY W. LAVIGNE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO AMERICAN AUTOMOTIVE CORPORATION, A CORPORATION OF DELAWARE.

SUPERADJUSTABLE GENERATOR.

Application filed January 30, 1925, Serial No. 5,840. Renewed June 9, 1927.

This invention relates to an electric generator and particularly to the case or housing therefor.

The principal object of the invention is to provide a generator case or housing constructed so that the same can be opened up in a minimum of time to expose the interior parts for the purpose of cleaning or repairs, and especially for the substitution of armatures and coils of different sizes so as to change the horse power of the machine. Another object of the invention is to provide an adjustment for the coils.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is an end view of a generator constructed in accordance with this invention;

Fig. 2 is a side view; and

Fig. 3 is an end view similar to Fig. 1, showing the parts opened up so that the interior is accessible.

The generator itself functions like a generator of the ordinary type but instead of having all the parts enclosed in a solid case or housing as at present, the casing is composed of three parts, a base 10 and two side housings 11 and 12. These two side housings are hinged to the base on pivots 13 so that they can be swung open to the inclined position shown in Fig. 3 for the purpose of permitting cleansing, repairs, or the changing of the armature coils for the purpose of altering the power of the generator. The two housings 11 and 12 are substantially in the form of semi-cylinders and have mounted upon them the field coils, 14. These are guided on radial rods 15 and provided with screws 16 parallel with these guide rods so that the field coils can be moved out or in, thus adjusting their effect on the armature 17 which is carried in bearings on one housing 11.

When the parts are closed together, they are held in closed position by two clamps 19 of the horse shoe type fitting on lugs 20 cast on the two housings. These lugs have depressions 21 and the clamps have screws 22 to screw into the depressions which have slanting faces. This constitutes a positive means for holding the parts in position.

I also provide a latch 23 pivoted on a pin 24 on the part 11 and engaging a lug 25 on the part 12. When put together, this latch automatically swings over the surface of the lug 25 and holds the parts together. A spring 26 wound on the pivot pin 24 operates the latch. A plunger or push button 27 is adapted to release it.

For the purpose of opening the generator when it is in the ordinary position shown in Fig. 1, it is necessary to remove the two sets of clamps 19, one set being located at each end of the frame. The set screws 22 first have to be loosened and then the clamps can be removed but after these clamps are taken off the two housings are still held in place by the latch 23. This is released by pressing on the plunger or button 27. Then the two housings can be swung apart as shown in Fig. 3 to expose all the inside parts of the machine.

This generator has several advantages over the present type of generator as it is possible to get at the inside for cleaning and repairs in approximately two minutes. In the old type of generator this operation takes several hours as there are several screws that have to be removed and often the covers stick so that they have to be driven off.

Another important feature of this generator is that it is possible for the user to have a single frame which will take the place of several ordinarily necessary. The owner can purchase one of these machines with several different sizes of armatures and coils. It is a matter of only a very few minutes to change the coils and armature so as to provide a machine supplying a different horse power. This is an important improvement over the present arrangement in which a complete generator has to be furnished for each power unit of a definite horse power. The armature and coils having a different power rating can be purchased for less than one half the price of a complete generator and when not in use they occupy practically no floor space or any other room that can be utilized for machinery. The adjustment of the field coils by means of the screw 16 is also an important feature of this invention.

Although I have illustrated and described only a single form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the

details of construction herein shown and described but what I do claim is:—

1. As an article of manufacture, an electric generator comprising a base and two housings pivoted to opposite ends of the base and capable of swinging positively away from each other on their pivots, field coils carried by each of the housings and an armature carried by one of them.

2. As an article of manufacture, a generator comprising two housing mounted to swing away from each other to inclined position about pivots at a distance apart and adapted to expose the interior of the generator when swung out.

3. In a generator, the combination with a base and two housings of a general semi-cylindrical form pivoted on the base at opposite ends thereof and adapted to swing about their pivots, said housings having lugs that register with each other when the generator is closed, and clamps for engaging the lugs and securing the housings together.

4. In a generator, the combination with a pair of pivoted housings, each carrying field coils and an armature carried by one of the housings, of a latch pivoted on one of the housings, a lug integral with the other, said latch being arranged to lock the two parts together by engaging the lug, a spring for holding the latch closed, and a plunger for releasing the latch in opposition to the spring.

5. In a generator, the combination with a field coil, of a guide radially located for guiding the field coil, and means for adjusting the field coil along the guide toward and from the armature of the generator.

In testimony whereof I have hereunto affixed my signature.

HENRY W. LAVIGNE.