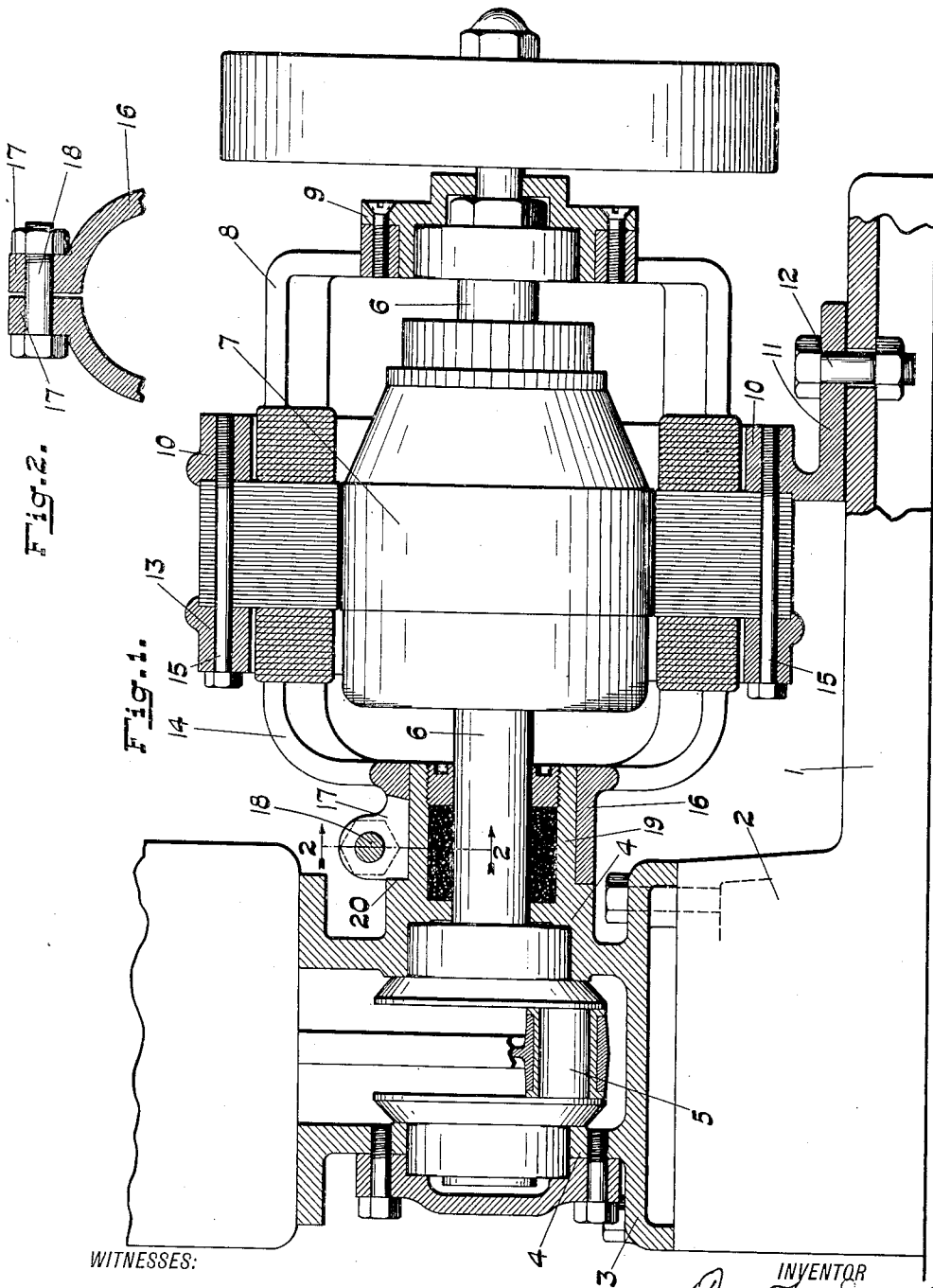


I. T. SWARTZ.
MOUNTING FOR ELECTRIC GENERATORS.
APPLICATION FILED OCT. 22, 1917.

1,293,573.

Patented Feb. 4, 1919.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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MOUNTING FOR ELECTRIC GENERATORS.

1,293,573.

Specification of Letters Patent.

Patented Feb. 4, 1919.

Application filed October 22, 1917. Serial No. 197,946.

To all whom it may concern:

Be it known that I, IRA T. SWARTZ, a citizen of the United States, residing at Indianapolis, Marion county, and State of Indiana, have invented and discovered certain new and useful Improvements in Mountings for Electric Generators, of which the following is a specification.

My invention relates to mountings for electric generators and its objects are to provide means of supporting and connecting the generator to the internal combustion engine or other prime mover in such a manner that as the generator is placed on its seat and moved thereon to couple its sleeve with the shaft of the engine it will be self-centering in such adjustment, and whereby the construction providing this function also renders it possible to dispense with several holders and clamps heretofore employed, and which it is difficult to adjust in alignment in connecting the generator to the engine shaft.

With these objects in view, my invention is embodied in preferable form in the construction and arrangement shown in the accompanying drawings and hereinafter described.

In these drawings, Figure 1 is a side view in elevation, partly in vertical section, of an electric generator and a prime mover therefor, consisting of an internal combustion engine, and Fig. 2 is a detail vertical section on the line 2—2 of Fig. 1.

Referring to the drawings, 1 is a base or pedestal for the power plant having the enlarged portion 2. On this elevated portion 2, of the base, is mounted a supplemental base 3, constituting a support for the crank case 4 of an internal combustion engine, the crank 5 of which is adapted to drive the main shaft 6 which is adapted to extend through the armature 7 of the electric generator, and to drive the same in the usual manner.

In the present invention the supporting means constituting the essential elements of my invention are formed as part of the brackets surrounding and connected to the field pieces of the generator and one of such supporting members is adapted to project below the armature shaft, and the other is adapted to project from the bracket parallel with the shaft.

Referring to these parts, 8 is one of the

bracket members which consists preferably of an open substantially circular spider frame having at its outer end a suitable hub 9 adapted to receive the bearing members and having at its inner end a continuous ring 10 which clamps the field sections. This ring 10 is provided at the lower edge of its border with horizontal supporting and clamping feet 11, one of which is shown, and these feet are secured to the base 1 by means of bolts 12. The ring 10 is clamped to a similar ring 13 of a spider bracket 14 by means of bolts 15. The outer end of the bracket 14 is integrally provided with an annular split sleeve or collar 16 having at the ends thereof lugs 17 connected by a clamping bolt 18. This integral split collar is adapted to fit over a circular prolonged hub or sleeve 19 formed integral with the crank case of the engine, and extending laterally therefrom and surrounding bearing members around the shaft 6. The split bearing sleeve 16 is adapted to engage the hub 19 with a close sliding fit when the clamping bolt 18 is loosened and said sleeve is pushed upon the fixed hub until it contacts with a stop shoulder 20 at the inner end of the fixed hub. The nut of the clamping bolt 18 is then tightened whereupon the collar will be tightly drawn around the hub so as to maintain the parts in rigid connection and take part of the strain from the other supporting and connecting members consisting of the feet 11.

Heretofore it has been usual to provide supporting means consisting of feet on both of the rings 10 and 13, which has necessitated great care in drilling the bolt holes for the feet, and considerable time and skill in assembling the parts in exact registry so that the center of the field sections shall be exactly co-incident with the axis of the driving shaft and exactly registered longitudinally of the shaft with the armature which is a point of great importance in producing the proper electromagnetic lines of force. With the present invention, the field sections owing to its integral sleeve 16, which is concentric with and closely fits with the hub 19, is self-centering and is merely adjusted to correct position by pushing the field sections along the base until the sleeve 16 engages the prolonged hub 19 whereupon the parts will be guided in true axial relation. The generator is pushed

upon the hub until the holes in the feet 11 are brought into registry with the corresponding holes through the base 1, whereupon the bolts 12 are inserted and tightened.

5 The split sleeve 16 is then tightened around the hub so as to secure the parts rigidly together and take part of the longitudinal strain from the feet 11. With this arrangement, the assemblage of the generator and
10 engine requires but a few minutes and after the parts have been connected the field sections and engine shaft will be exactly centered.

Having thus described my invention,
15 what I claim is:—

1. In mountings for electric generators, in combination with the armature, and rigidly connected field sections thereof, rigid supporting brackets for the field sections
20 secured to opposite ends of the latter at either end of the armature, a supporting base having a horizontal surface, below the field sections, an internal combustion engine and its shaft, said armature being mounted on said
25 shaft, the inner bracket of said field section supporting members being provided with an annular sleeve concentric with the field sections and with said shaft, and extending laterally from the bracket, an annular prolonged fixed hub extending from the
30 structure of said engine and surrounding said shaft, and on which said sleeve is

adapted to have a close concentric fit as the same is slid thereon, said sleeve and hub connection constituting the sole support for
35 the inner end of the field sections, and the outer bracket member constituting the sole outer support and being provided with flat supporting feet bolted to said horizontal
40 base.

2. In mountings for electric generators, in combination with the armature and the fixed field sections, a bracket on each side of the armature rigidly connected to the generator, a supporting base, the outer bracket
45 having supporting feet rigidly clamped to the said base, a prime mover, said prime mover having a prolonged annular hub extending from its structure and surrounding its shaft, the inner bracket of said generator
50 having a split annular sleeve extending laterally therefrom and concentric with the field sections and shaft and having a close sliding fit when loosened, upon said hub, and means to clamp said sleeve upon said hub.
55

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 21st day of September, A. D. nineteen hundred and seventeen.

IRA T. SWARTZ. [L. s.]

Witnesses:

H. P. DOOLITTLE,
M. L. SHULER.