No. 868,580. PATENTED OCT. 15, 1907.

W. D. POMEROY.

DYNAMO ELECTRIC MACHINE.

APPLICATION FILED JAN. 2, 1906.

Fig. 3.

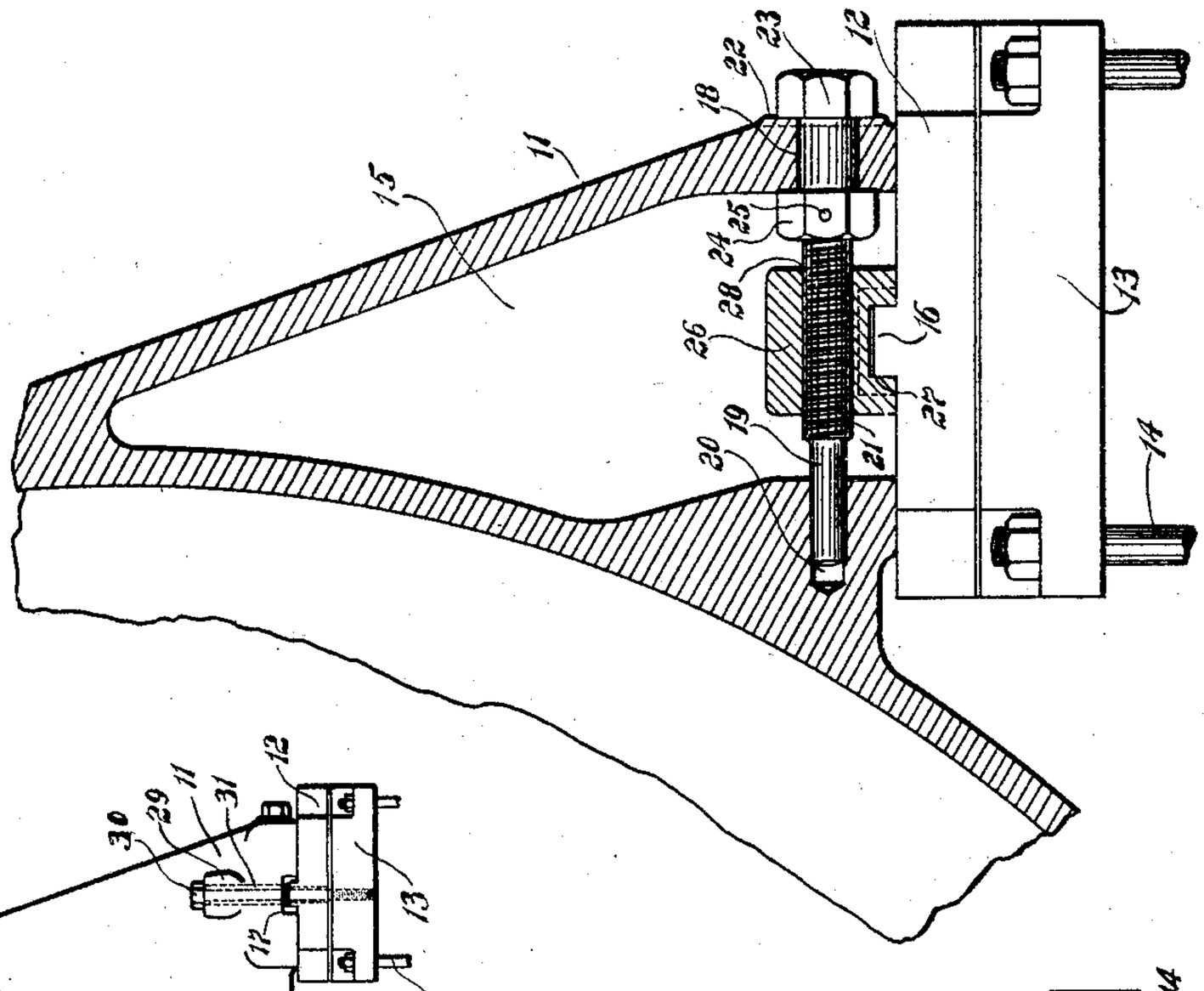


Fig. 1.

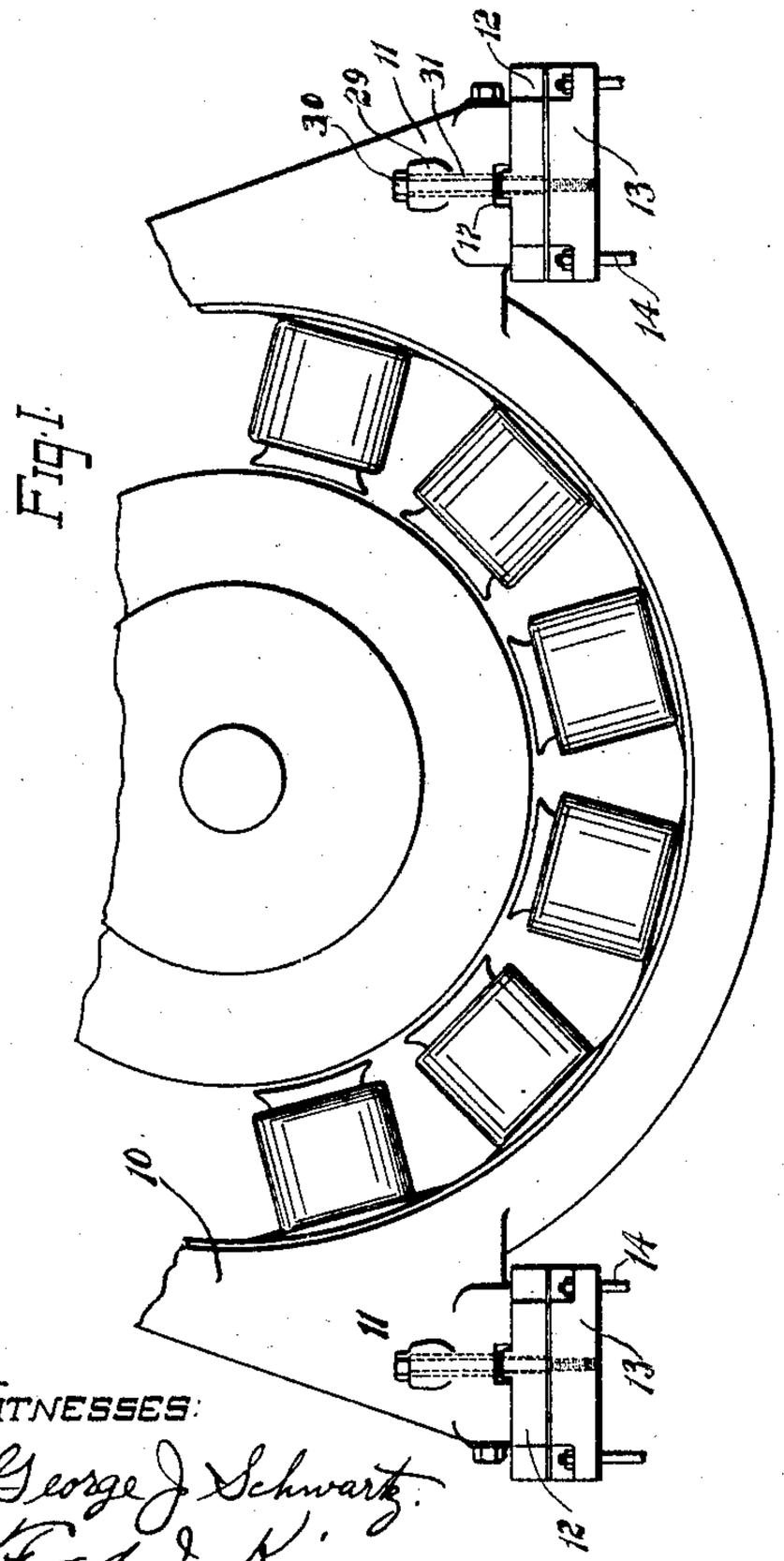
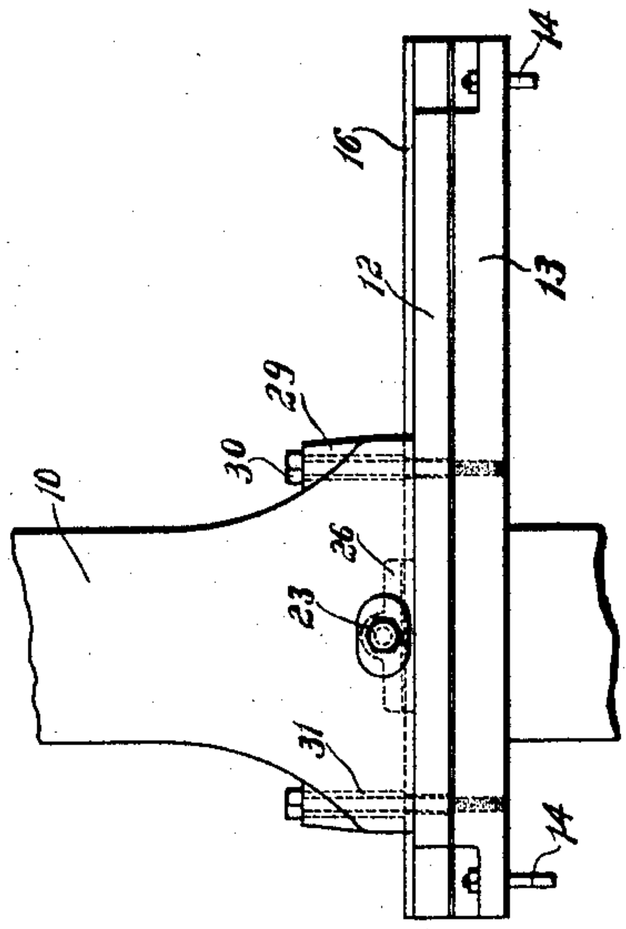


Fig. 2.



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WILLIAM D. POMEROY, OF NORWOOD, OHIO, ASSIGNOR TO THE BULLOCK ELECTRIC MANUFACTURING COMPANY, A CORPORATION OF OHIO.

DYNAMO-ELECTRIC MACHINE.

No. 868,580. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed January 2, 1906. Serial No. 294,087.

To all whom it may concern:

Be it known that I, WILLIAM D. POMEROY, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Dynamo-Electric Machines, of which the following is a full, clear, and exact specification.

My invention relates to dynamo-electric machines and especially to large machines the stationary yokes or frames of which rest upon sole plates or foundation plates which are mounted directly on masonry or concrete foundations.

In small dynamo-electric machines the shaft bearings are integral with the yoke or the yoke and the standards which support the bearings are integral with or mounted on a base or frame. In such machines, it is a comparatively easy matter to properly locate the parts or to adjust the relative positions of the yoke and rotary member. In large machines, however, special means must be provided for adjusting the yoke, in different directions so that the latter may be located in the proper position relative to the rotary member. It is also necessary that means be provided for retaining the yoke in position after adjustment.

The object of my invention is to provide an improved means for adjusting the yoke in the direction transverse to the longitudinal axis of the machine, and for retaining the yoke in its proper position.

My invention consists in certain novel details of construction and combinations of elements described in the specification and set forth in the appended claims.

For a better understanding of my invention, reference is had to the accompanying drawings forming a part of this application, in which

Figure 1 is a partial end elevation of a field frame or yoke, showing the supporting sole plates at each side thereof; Fig. 2 is a partial side elevation of the same; and Fig. 3 is a sectional elevation of a portion of the field frame and sole plate showing in detail the adjusting means.

I have shown in the drawing means for adjusting the yoke transversely to the axis of the machine only, as my invention relates principally to this adjusting means. It is to be understood however, that any suitable means can be employed for adjusting the yoke vertically, and in the direction of the longitudinal axis of the machine. The yoke 10 which is in this instance a field yoke is provided at each side with supporting lugs or feet 11. The feet rest upon upper sole-plates 12, which in turn rest on lower sole-plates 13. The lower sole-plates 13 are provided with a suitable number of bolts 14, which extend into the supporting foundation (not shown.) The sole-plates are carefully machined, and the lower plate 13 is mounted on the foundation so that its upper surface and the upper surface of plate 12 will be perfectly horizontal. Shims may be placed between the plates 12 and 13 to adjust the yoke vertically, and any suitable means may be employed for raising the upper plates for that purpose. Each upper plate is provided with a spline 16, preferably rectangular in outline. The splines on the two plates are parallel to each other and to the axis of the machine and extend the full length of the plates. The object of these splines is to guide the yoke when the latter is adjusted in an axial direction.

Each supporting foot is provided with a recess or opening 15 in its lower face, the recesses being preferably formed when the yoke is cast. The walls of the feet are of such thickness as to provide sufficient strength to support the weight of the yoke and coils. The lower faces of the feet are carefully machined, so that the latter will rest securely and evenly on the upper faces of the sole plates 12. Each foot is provided on each side with a rectangular notch 17, slightly larger than the splines 16, as is shown in full lines in Fig. 1 and in dotted in Fig. 3, so that the splines will not interfere with a limited transverse adjustment of the yoke. The lower sides of the recess 15 in each foot are parallel and vertical. A hole 18 is drilled in the lower and central part of the outer wall of each foot to form a bearing for the outer end of an adjusting bolt 19. A recess 20 is also drilled in line with the hole 18 for a suitable distance in the inner wall of each foot, to form an inner bearing for the bolt, the inner recesses 20 being preferably smaller in diameter than the holes 18. Each bolt 19 is provided with a threaded portion 21 between the ends. The portions which engage the hole 18 and recess 20 are unthreaded, so that when the bolt is rotated there will be no longitudinal movement thereof relative to the foot. The outer surfaces of the feet are machined at 22 to form bearings for the heads 23 of the bolts, which heads engage closely the machined portions. A nut 24 is mounted on each bolt in the inner side of each wall, and is held in place preferably by a pin 25. By means of the head 23 and nut 24, longitudinal movement of the bolt in either direction relative to the foot is prevented.

Mounted on the upper face of each of the plates 12 is a block 26, preferably of steel. This block is provided throughout its length with a rectangular groove 27, the sides of which engage the spline 16. Each block is also provided with a threaded bolt hole 28 above the longitudinal groove and at right angles thereto. This threaded hole in each block is engaged by the threaded portion of a bolt 19 as is shown in Fig. 3. As is clear from the drawings, when the bolts are rotated by applying wrenches to the external heads 23, the blocks being held stationary by the splines, the yoke will be

moved at right angles to the splines and to the axis of the machine in one direction or the other depending on the direction in which the bolts are rotated. When the yoke is adjusted or moved in a direction parallel to the longitudinal axis of the machine, the blocks 26 move with the yoke along the splines 16 which serve as guides for the yoke.

The feet are provided at each side with lugs 29, which are drilled to receive holding bolts 30. These bolts pass through the upper plates 12 and into the lower plates 13, so that the yoke, and upper and lower sole plates will be held in place. The openings through the lugs 29 which receive the bolts are slightly larger in diameter than the diameter of the bolts, as is shown in dotted lines at 31, so as to permit an adjustment of the yoke. After the yoke is adjusted to its proper position the bolts are tightened.

It is seen that the adjustment shown and described is simple and effective, and furthermore the yoke will remain exactly in the proper position until the bolts 19 are again rotated.

I aim in my claims to cover all modifications which do not involve a departure from the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent is:—

1. In combination, a dynamo-electric machine yoke, a base or support on which said yoke is directly mounted, a member operatively related to said base and yoke, means operative to permit motion longitudinally and preclude motion transversely between said member and the base, and means coöperating with the yoke and said member for adjusting the position of said yoke transversely.

2. In combination, a dynamo-electric machine yoke having hollow or recessed supporting feet, a base or support on which said yoke is mounted, a member resting on the base within one of the hollow supporting feet and movable relative to said base, means for constraining said member to follow a predetermined path in its movement relative to said base, and means engaging the yoke and said member for adjusting the position of the yoke in a direction transverse to said path.

3. In combination, a dynamo-electric machine yoke having hollow or recessed supporting feet, supports on which said feet rest, movable members on said supports within the hollow supporting feet, means operative to permit motion longitudinally and preclude motion transversely between said members and said supports, and bolts mounted in the walls of said yoke and engaging said members for adjusting the position of the yoke transversely of the axis of the machine.

4. In combination, a dynamo-electric machine yoke having a supporting foot or lug on each side thereof, each of said supporting feet having a recess or opening in its lower face, a pair of sole plates upon which said yoke feet rest, a member mounted on each sole plate within the recess in such a manner that it may be moved longitudinally of said sole plate, and a bolt rotatably mounted in the walls of said recess, said bolt having a threaded portion engaging said member, and means whereby said bolt may be rotated to adjust the position of the yoke.

5. In combination, a dynamo-electric machine yoke having a supporting foot or lug at each side thereof, each of said supporting feet having an opening or recess in its lower face, a pair of sole plates upon which said yoke feet rest, a block mounted on each of said sole plates and movable only longitudinally thereof, a horizontal bolt mounted in the walls of each of said feet and passing through a threaded opening in the block, whereby, by turning the said bolts, the position of the yoke can be adjusted relatively to the sole plates.

6. In combination, a dynamo-electric machine yoke having supporting feet at opposite sides thereof, each of said supporting feet having an opening or recess in its lower face, a pair of sole plates upon which said yoke feet rest, a spline on each of said sole plates extending longitudinally thereof, a block having a groove corresponding in shape to that of the spline, and movable thereon and having also a threaded opening arranged at right angles to said groove, and means for adjusting the position of the yoke transversely of the sole plates comprising horizontal bolts mounted in the walls of said feet, each of which bolts having a threaded portion which engages the threaded opening in one of said blocks.

7. In combination, a dynamo-electric machine yoke having supporting feet at opposite sides thereof, each of said supporting feet having a recess in its lower face, a pair of stationary lower sole plates, foundation bolts extending therethrough, an upper sole plate mounted on each of said lower sole plates, each of said upper sole plates having a block movable longitudinally thereof, each of said yoke feet resting on one of said upper sole plates and having a recess or opening in which the block is located, and means for adjusting the yoke comprising bolts mounted in the walls of the supporting feet said bolts having threaded portions which engage threaded openings in the blocks.

8. In combination, a dynamo-electric machine yoke having supporting feet at opposite sides thereof, each of said supporting feet having a recess in its lower face, a pair of stationary lower sole plates, foundation bolts extending therethrough, an upper sole plate mounted on each of said lower sole plates, each of said upper sole plates having a block movable longitudinally thereof, said yoke feet resting on said upper sole plates and having recesses or openings in which the blocks are located, means for adjusting the yoke comprising bolts mounted in the walls of the supporting feet and having threaded portions which engage threaded openings in the blocks, and bolts passing through the feet on the yoke and both of said sole plates, whereby the yoke will be held in position after adjustment.

In testimony whereof I affix my signature, in the presence of two witnesses.

WILLIAM D. POMEROY.

Witnesses:
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