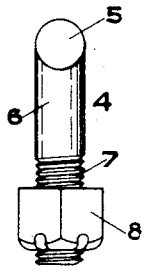
No. 792,607. PATENTED JUNE 20, 1905.

J. F. McELROY.

MEANS FOR ATTACHING POLE PIECES.

APPLICATION FILED MAR. 30, 1905.

Fig. 3.



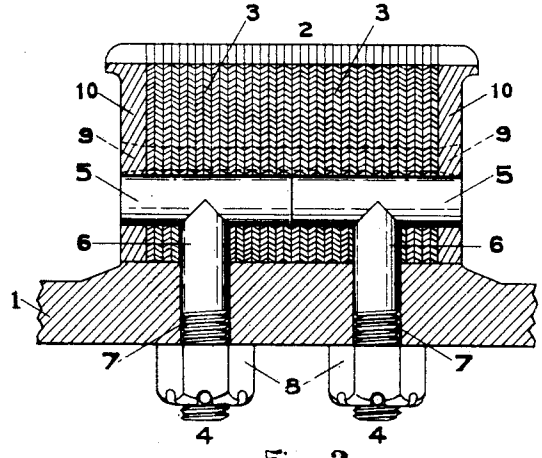
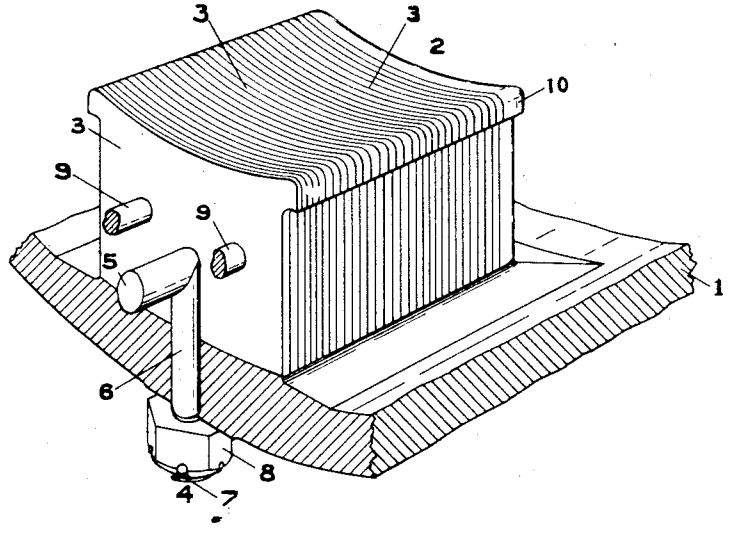


Fig. 2.

Fig. 1.



Witnesses
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Inventor
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PHOTO-LITHOGRAPHED BY SACHETT & WILHELMS LITH. & PTG. CO. NEW YORK.

No. 792,607. Patented June 20, 1905.

UNITED STATES PATENT OFFICE.

JAMES F. McELROY, OF ALBANY, NEW YORK, ASSIGNOR TO CONSOLIDATED CAR HEATING COMPANY, OF ALBANY, NEW YORK, A CORPORATION OF WEST VIRGINIA.

MEANS FOR ATTACHING POLE-PIECES.

SPECIFICATION forming part of Letters Patent No. 792,607, dated June 20, 1905.

Application filed March 30, 1905. Serial No. 252,980.

To all whom it may concern:

Be it known that I, JAMES F. McELROY, a citizen of the United States, residing at Albany, county of Albany, State of New York, have invented certain new and useful Improvements in Means for Attaching Pole-Pieces, of which the following specification and accompanying drawings illustrate one form of the invention which I now regard as the best out of the various forms in which the invention may be embodied.

This invention relates to a means for securing laminated magnet-pole pieces to their seats or yokes. Its principal objects are increased strength and simplicity.

Of the accompanying drawings, Figure 1 represents a perspective view of an embodiment of the invention, partly in section. Fig. 2 represents a radial section transverse to the planes of the disks. Fig. 3 represents an elevation of the bolt looking endwise of its head portion.

In the drawings, 1 is the magnet-yoke or attaching-base, and 2 is the pole-piece or magnet-core made up in a well-known manner of a large number of separate sheets or laminæ 3 3.

4 4 are the attaching-bolts, of which I have shown two for each pole-piece, each bolt being T-shaped and composed of a head or key portion 5 and a stem portion 6, integral with and projecting at right angles to the head portion. This stem projects sufficiently beyond the seating-face of the pole-piece to traverse the yoke 1 and is formed with a screw-thread 7, engaged by a nut 8 on the outside of the yoke, whereby the pole-piece is clamped to the yoke.

Preferably each pole-piece is provided with three holes transverse to the laminæ, which holes may be made in the laminæ when the latter are punched out. Two of these holes are occupied by rivet-bars 9 9, upset on their ends for holding together the laminæ as a unit or group. I have also shown malleable-iron cheek-plates 10 10 with rounded edges for the terminal plates of the group. A third transverse aperture in the pole-piece receives the cross-bars, heads, or key portions 5 of the bolts. In addition to the transverse holes there are formed in the pole-piece from its seating-face holes parallel to the planes of the laminæ for receiving the stems 6 of the bolts.

After the laminæ have been assembled as a unit the holes for the stems 6 may be bored. The laminæ are then separated in the middle of the stem-holes, the bolts 4 inserted, and the laminæ reassembled, or the bolts may be inserted as the liminæ are piled together and the rivets 9 then inserted and upset on their ends to secure the whole together. The pole-piece is then complete ready for attachment, and it is observable that the bolts cannot be removed without separating the laminæ. The bolt-stems cannot be lost, and they serve as dowels to position the pole-piece on its seat when applied thereto.

Greater strength is attained by this method of attachment than by a method which involves screw-holes or other openings in the part which traverses the laminæ. The bolts are drop-forged, and at the juncture between stem and head they have the full strength due to the cross-section of metal at that point, which would not be true, for example, of a cross-piece bored to receive a threaded stem or bolt. The cross-piece may also be of smaller dimensions than in the prior arrangement just mentioned.

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

1. The combination with a pole-piece made up of separate laminæ, of an attaching-bolt having a key portion confined in the laminæ and a stem portion at an angle to and integral with the key portion.

2. The combination with a pole-piece made up of separable laminæ, of an attaching-bolt having a head embedded in the laminæ transverse to the planes thereof, and a stem integral therewith, projecting beyond the pole-piece longitudinally of the planes of the laminæ and formed with attaching means on its projecting portion.

3. The combination with a pole-piece made up of separable laminæ, of a T-shaped one-

piece bolt whose head occupies a transverse close-fitting aperture in the pole-piece and its stem, a longitudinal aperture therein, and means engaging a projecting end of the stem for securing the pole-piece to a yoke.

4. The combination with a magnet-yoke, of a laminated pole-piece, an attaching-bolt having its stem embedded between the laminæ of the pole-piece, a key portion integral with the stem and engaging the laminæ, and a projecting portion on the stem traversing the yoke and screw-threaded, and a nut engaging the screw-thread for securing the bolt and pole-piece to the yoke.

5. The combination with a laminated pole-piece having means holding its group of laminæ together, of a one-piece bolt embedded therein and having an externally-projecting stem irremovable except by separation of the laminæ.

In witness whereof I have hereunto set my hand, before two subscribing witnesses, this 27th day of March, 1905.

JAMES F. McELROY.

Witnesses:
WILLIAM A. MORRILL, Jr.,
ERNEST D. JANSEN.