March 13, 1928. 1,662,765

R. VARLEY

ADJUSTABLE COIL MOUNTING

Filed Nov. 23, 1926

Fig 1

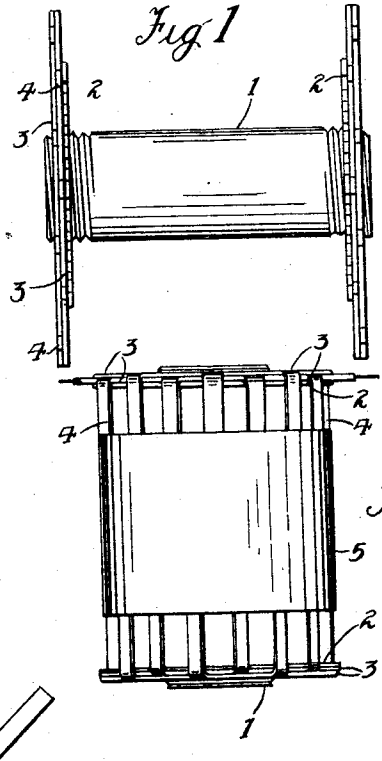


Fig 5

Fig 3

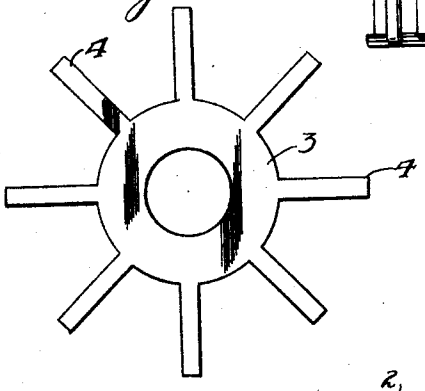


Fig 2

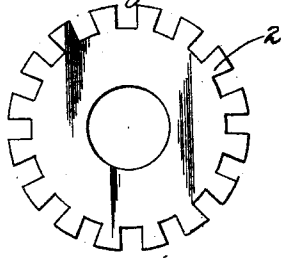
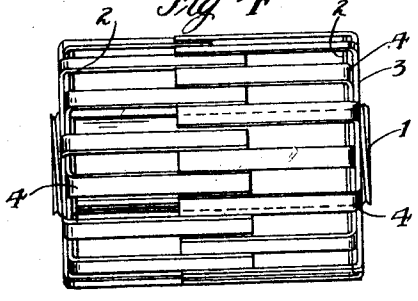


Fig 4



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UNITED STATES PATENT OFFICE.

RICHARD VARLEY, OF ENGLEWOOD, NEW JERSEY, ASSIGNOR TO VARLEY DUPLEX MAGNET CO., A CORPORATION OF NEW JERSEY.

ADJUSTABLE COIL MOUNTING.

Application filed November 23, 1926. Serial No. 150,366.

This invention relates to means for mounting or supporting coil windings and particularly to a mounting adapted to rigidly mount and accommodate various sizes of pre-wound coils.

It is the purpose of this invention to provide an adjustable and interlocking mounting for coils which may be used for different sizes of coils and which will hold the coil in such a manner as to prevent any movement of the coil relatively to the mounting.

To accomplish this purpose it is within the contemplation of this invention to use a core having adjustable and detachable end pieces or coil cheeks mounted thereon and to provide locking means for locking the end pieces in their adjusted position against a winding mounted on the core. In this manner a machine-wound coil may be placed upon a mounting and used for many purposes. In the case where great quantities of coils are used it is obvious that where provision is made for the use of machine-wound coils adapted to be later assembled upon a mounting, the cost of production is materially reduced over the old method of winding each coil upon the form upon which it is to be subsequently used.

A more comprehensive understanding will be had from the detailed description following, taken in connection with the drawings, in which:

Fig. 1 is a side elevation of the elements of a coil mounting made in accordance with this invention in partially assembled condition;

Fig. 2 is an elevation of one of the disk end pieces or cheeks;

Fig. 3 is an elevation of one of the locking spiders or washers;

Fig. 4 is a side elevation of the elements shown in Fig. 1 in assembled condition, and

Fig. 5 is a side elevation of a complete coil mounted upon a mounting constructed in accordance with this invention.

In the embodiment herein illustrated and described there is provided a round tubular core 1 which is coarsely threaded a substantial distance inward from both ends in order that the same core may be used for mountings for coils of various lengths. Upon each end of core 1 there is threaded an end piece or cheek consisting of a disk or washer 2 which may be conveniently made of some insulating material having a central hole therein of such a diameter as to permit the disk to be threaded upon the end portions of the core. The disk is serrated to provide alternate notches (sixteen being shown) along its periphery for reasons to be described. The end pieces are adapted to be screwed up tightly against the end walls of a coil placed upon the core to hold the coil rigidly upon the core and to prevent the coil from sliding or rotating upon the core.

In addition to the end pieces 2, means are provided for locking these end pieces in their adjusted position relatively to the core and to the coil thereon and prevent the disks from becoming loosened. To this end one or two locking spiders 3 are placed upon each end of the core outside of and adjacent to the disks 2. These locking spiders consist of a thin flexible washer having a central aperture of sufficient diameter to permit the washer being slipped over the ends of the core and have fingers 4 projecting radially therefrom adapted to be bent over and engaged within the slots of the serrated disks 2 and lashed tightly to the coil upon the core thereby insuring absolute rigidity between the coil and the mounting. It has been found convenient to use two spiders upon each end, each spider being shown as having eight fingers, the fingers being bent and placed in alternate slots in the disks. The fingers may be held down and in position by means of a band or tape 5 wound around the outside of the assembled coil.

Any type of lead wire may be used and brought out between the spiders or in any other desired manner.

In assembling a coil upon the mounting described, a coil previously wound by a coil winding machine may be placed upon the core 1, one or more end pieces 2 are then screwed upon the ends of the tube into firm engagement with the end walls of the coil and if the coil is short the notches of the end pieces are staggered so that if the fingers 4 overlap, the overlapping portions will not overlie each other. Two spiders 3 are then placed upon each end and the projecting fingers are bent over to engage in alternate slots in the end pieces 2 and are lashed

in this position to the coil with a band 5 wound around the fingers and coil. This band will tend to prevent any rotation of the coil relatively to the mounting. The assembled coil and mounting may then be dipped or impregnated with some cement or insulating material.

It is apparent that many modifications may be involved without departing from the spirit and scope of this invention as defined in the appended claims.

I claim:

1. A coil mounting, comprising a core adapted to have a coil mounted thereon, and spaced end plates adjustably mounted upon said core, means for securing said plates in any desired position lengthwise of the core against a coil, and means for locking the plates in their secured position to the coil so as to prevent relative movement thereto.

2. A coil mounting, comprising a core adapted to have a coil mounted thereon, spaced end plates on said core, means on said core cooperating with said plates to secure the plates to said core, and locking-disks for locking said plates in secured position.

3. A coil mounting, comprising a core adapted to have a coil mounted thereon, spaced serrated end plates mounted on the core, and spiders having fingers projecting therefrom adapted to engage with said plates, and means for securing said fingers to said coil.

4. A coil mounting, comprising a core adapted to have a coil mounted thereon, serrated end plates having threaded engagement with the core mounted upon each end thereof, spiders having fingers projecting therefrom adapted to be folded over and engage in said serrations to prevent movement of said plates.

5. A coil mounting, comprising a core adapted to have a coil mounted thereon, serrated end plates having threaded engagement with the core mounted upon each end thereof, spiders having fingers projecting therefrom adapted to be folded over and engage in said serrations to prevent movement of said plates, and a band for securing said fingers in folded position upon said coil.

6. A coil mounting, comprising a core adapted to have a coil mounted thereon, spaced end plates mounted on said core, means on said core cooperating with said plates to secure the plates to said core, and locking discs for locking said plates in their secured position and to the coil to prevent relative movement thereto.

In witness whereof, I hereunto subscribe my signature.

RICHARD VARLEY.