No. 892,763. PATENTED JULY 7, 1908.

C. A. PFANSTIEHL.

INDUCTION COIL UNIT.

APPLICATION FILED NOV. 11, 1907.

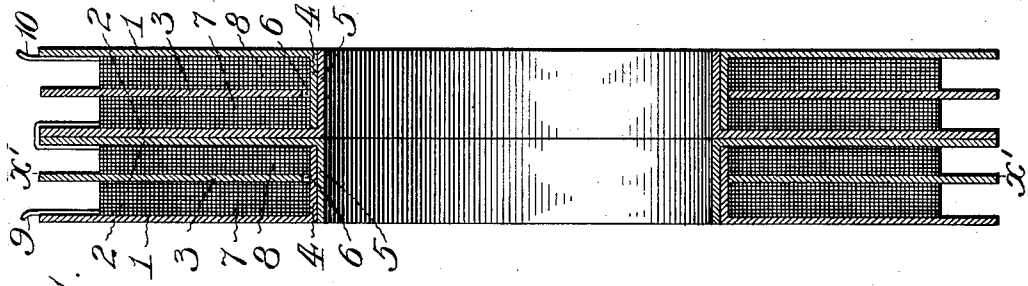


Fig. 1.

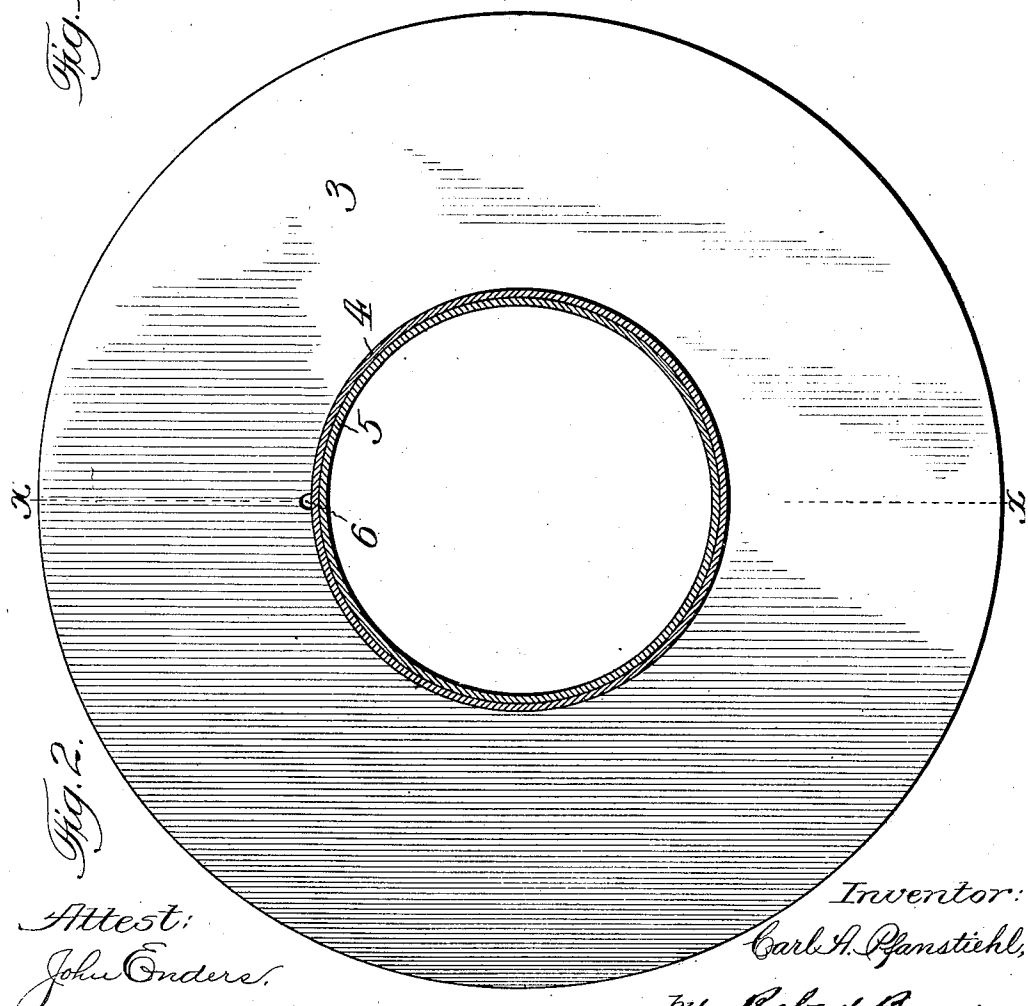


Fig. 2.

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UNITED STATES PATENT OFFICE.

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INDUCTION-COIL UNIT.

No. 892,763. Specification of Letters Patent. Patented July 7, 1908.

Application filed November 11, 1907. Serial No. 401,640.

To all whom it may concern:

Be it known that I, CARL A. PFANSTIEHL, a citizen of the United States of America, and a resident of Highland Park, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Induction-Coil Units, of which the following is a specification.

This invention relates to the type of induction coil units or sections set forth in my prior patent No. 862,506 of August 6, 1907; and has for its object to provide a simple and efficient structural arrangement and combination of the casing or spool parts, whereby the liability to short circuiting between adjacent secondary windings of a high frequency coil, is prevented in a very effective manner, all as will hereinafter more fully appear.

In the accompanying drawings:—Figure 1, is a vertical section on line x—x, Fig. 2 of a pair of twin or double coil units in associated relation. Fig. 2 is a transverse section on line x'—x' Fig. 1.

Similar numerals of reference indicate like parts in both views.

Referring to the drawings, 1 and 2 are centrally orificed companion spool heads, which with a similarly orificed intermediate head or disk 3 constitute the shell or spool of a twin unit or coil section, as in my former patented construction. Such parts are formed of paper board, wood pulp or like non-electric material and preferably saturated with paraffin or the like. Each of said heads 1 and 2 are provided with inner annular necks 4 and 5, which in the present improvement are made to slip one over the other, and with the end of the outermost neck abutting against the inner face of the opposite spool head, as clearly illustrated in Fig. 1.

In the preferred arrangement of parts as shown in Fig. 1, the innermost of said necks 5, will be upon the inner disks or heads 2, when a pair of the units or sections are assembled together as the whole, or a part of an induction coil. With such construction a leakage of the current at the central part of the coil would have to travel in the seams between the necks 4 and 5, and then return, a total distance equal to four times the width of a coil unit, in order to establish a short circuit. As a consequence the liability to a leakage at the inner and most usual portion of the coil is reduced to a minimum in exceptional cases, and absolutely prevented in most cases.

While the particular arrangement just described is preferred for reasons stated, it is within the scope of the present invention to assemble the pairs of double units of the specific construction, with the innermost necks upon the outer heads of the spools, should the judgment of the constructor so direct.

6 are orifices or passages in the inner margins of the intermediate disks 3, adapted, as in my former patented construction to receive the middle portion of the wire which form the individual coil windings 7 and 8 to constitute a twin unit or double coil section of the present construction, and which are wound in reverse directions preferably by the coil winding mechanism which forms the subject matter of my former patent No. 862,935 of August 13th 1907. Said windings are formed from a single wire extending through an aforesaid orifice 6 of the intermediate disk or head 3, so that there will be no inner coil ends to mechanically connect; the only connection required in the assemblage of coil units together, being the attachment of the external wire ends 9 and 10 of the windings 7 and 8 together in the usual manner.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:—

A coil section or unit, comprising a pair of outer spool heads formed with central orifices and annular necks, one of which necks fits over the other, an intermediate head formed with a corresponding orifice and with a small passage adjacent to said orifice, said intermediate head being arranged intermediate of the outer spool heads, and reversed coil windings in the annular cavities between the heads aforesaid and connected together by a wire extension passing through the small passage aforesaid, substantially as set forth.

Signed at Waukegan, Illinois this 8th day of November 1907.

CARL A. PFANSTIEHL.

Witnesses:
ELAM L. CLARKE,
BERT TOMPKINS.