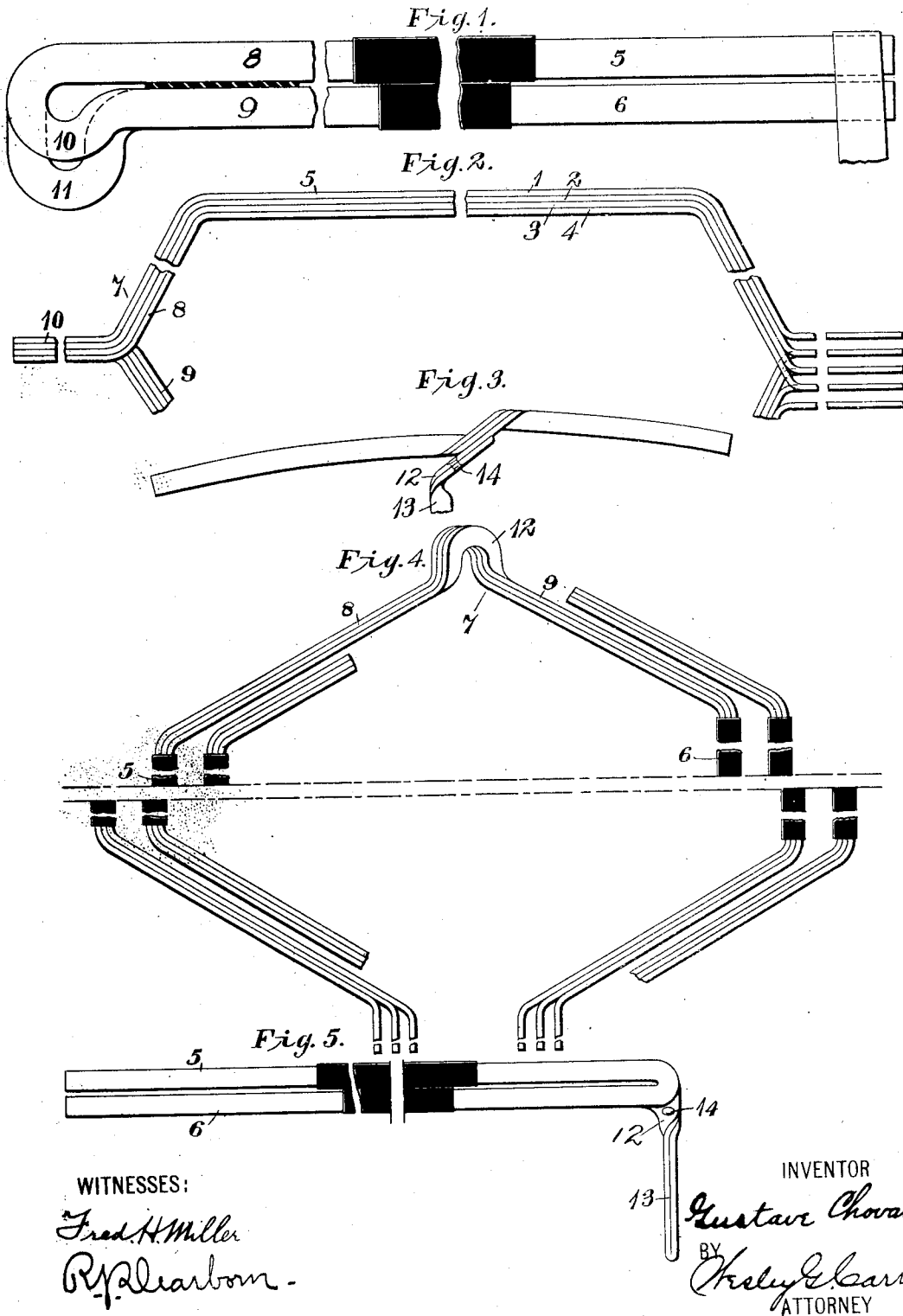


G. CHOVAN.
 COIL FOR DYNAMO ELECTRIC MACHINES.
 APPLICATION FILED MAR. 3, 1906.

957,866.

Patented May 17, 1910.



UNITED STATES PATENT OFFICE.

GUSTAVE CHOVAN, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

COIL FOR DYNAMO-ELECTRIC MACHINES.

957,866.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed March 3, 1906. Serial No. 304,062.

To all whom it may concern:

Be it known that I, GUSTAVE CHOVAN, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Coils for Dynamo-Electric Machines, of which the following is a specification.

My invention relates to coils for dynamo-electric machines and it has for its object to provide a coil of this class which shall be simple, durable and easily formed, in accordance with general practice, and which shall be specially adapted for the winding of armatures having cross-conductors for interconnecting equipotential points.

When interconnecting conductors or cross-connectors are employed for the armatures of dynamo-electric machines which are wound with strap conductors, clips or connectors have usually been riveted or otherwise attached to the portions of the coils to be connected, suitable interconnecting conductors being soldered or otherwise connected to the clips. The coils have two straight portions that are included in armature slots which are separated by a considerable arc dependent upon the number of poles, parts of two coils being located in each slot. With this arrangement, it has been found that the end connections for the coils which are outside the armature slots may advantageously assume a V-shape with a loop in the angle of the V which changes the plane of the conductors from that in which they leave one armature slot to the plane in which they enter a second slot and the clips which received the cross-connections have been attached to the aforesaid bent portion of the coil.

According to my present invention, I prolong one of the strap conductors, of which the coil is comprised, at its looped portion and twist the side portions of the loop together so that the cross-connections themselves may readily be attached, in any suitable manner, to the elongation.

In the accompanying drawings, Figure 1 is an elevation and Fig. 2 a plan view, of a coil formed in accordance with my invention. Fig. 3 is an end elevation, Fig. 4 a plan view and Fig. 5 a side elevation of a coil embodying a form slightly modified from that shown in Figs. 1 and 2.

Referring to Figs. 1 and 2, the coil illus-

trated therein comprises a group of strap conductors 1, 2, 3 and 4, and includes in its formation two straight portions 5 and 6, which are adapted to be located in suitable slots in an armature core, and an end connecting portion 7. The connecting portion 7 comprises an upper portion 8 which is connected to the straight portion 5 and a lower portion 9 which is connected to a straight portion 6 and a loop 10 which connects the conductors of the upper and lower planes. The loop 10 formed by three of the conductors 1, 2, 3 and 4 is made as short as the dimensions of the strap of which they are constructed will allow, but the loop 11 of the fourth conductor is elongated to extend below the other conductors of the coil in order that suitable cross-connections may be attached thereto.

Referring to Figs. 3, 4 and 5, the coils illustrated therein have the same general form as the coil illustrated in Figs. 1 and 2, except that instead of the loops 10 and 11, which are located substantially in radial planes relative to the core with which the coil is adapted for use, a loop 12 is provided between the end portions 8 and 9 which is located in a diagonal plane and the elongated conductor is twisted through substantially a half turn and projects a material distance below the loop, as indicated at 13. It may be advisable, in some cases, to fasten the two portions of the conductor together just before the twist occurs which may be accomplished by a rivet 14. The projection formed in this way corresponds to the projection 11 and suitable cross-connections may readily be attached thereto.

The elongations or projections which are hereinbefore described may be of any suitable form or length and their use is not restricted to any specific form of coil.

I desire that variations of form or use which do not depart from the spirit of my invention shall be included within its scope.

I claim as my invention:

1. A coil for dynamo-electric machines composed of turns of strap conductor and having a projection in the form of an elongated and twisted looped portion which is located between the portions of the coil to be included in the core slots.

2. A coil for dynamo-electric machines composed of turns of strap conductor and having a projection for attachment to cross-

connectors which is in the form of an elongated and twisted looped portion and is located between the portions of the coil to be included in the core slots.

5 3. In a dynamo-electric machine, a coil comprising a plurality of turns of strap conductor one of which projects beyond the others at one end to form a loop the sides of which are twisted and riveted together.

10 4. In a dynamo-electric machine, a coil comprising a plurality of turns of strap

conductor one of which projects beyond the others at one end to form a loop the sides of which are twisted together to a plane substantially parallel to the end of the machine. 15

In testimony whereof, I have hereunto subscribed my name this 20th day of February, 1906.

GUSTAVE CHIOVAN.

Witnesses:

R. J. DEARBORN,
BIRNEY HINES.