No. 685,290.

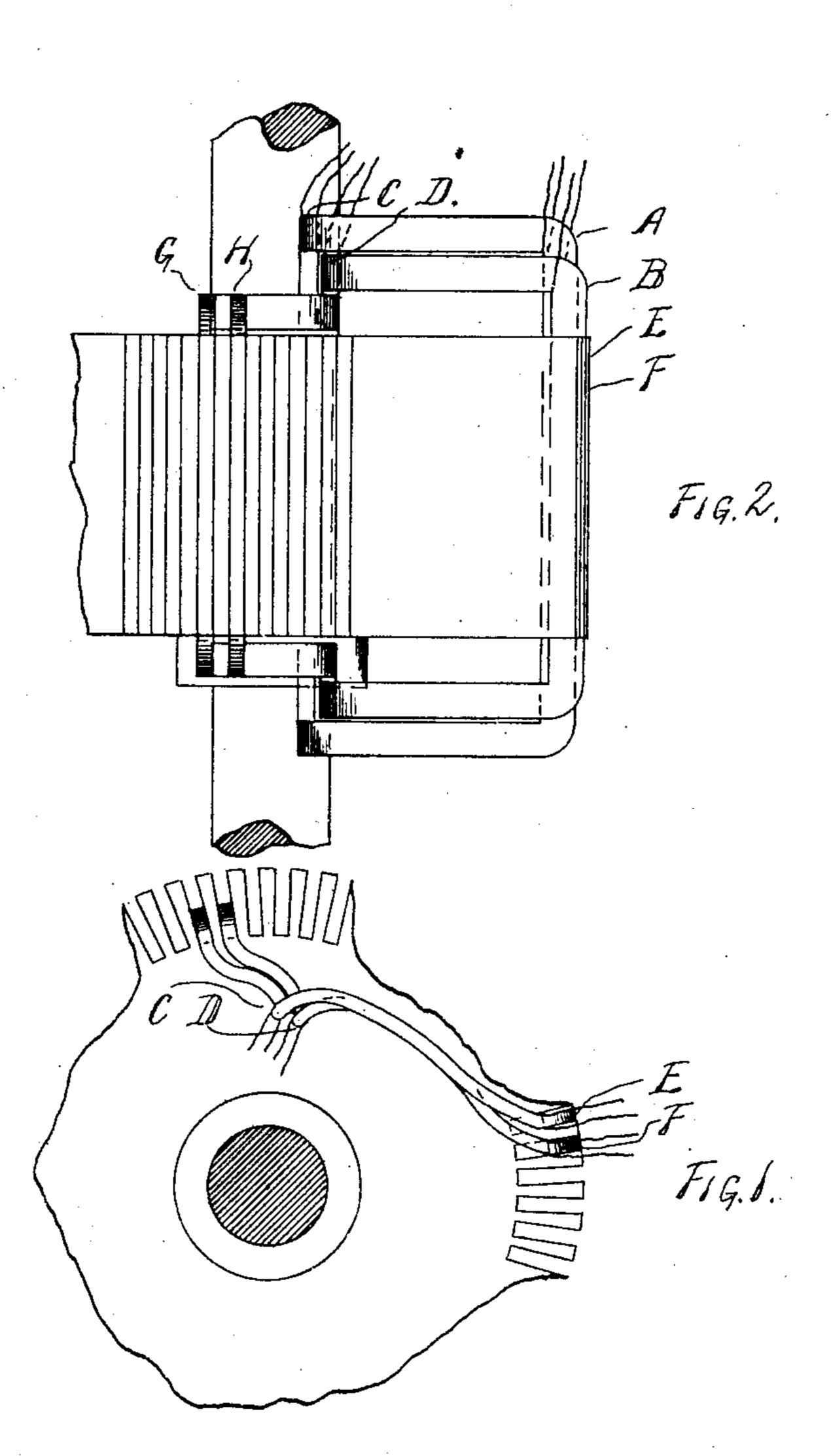
Patented Oct. 29, 1901.

## T. J. MURPHY.

## SYSTEM OF ARMATURE WINDING.

(Application filed May 4, 1901.)

(No Model.)



Milnesses. B. Harritt

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THE NORRIS PETERS CO., PHOTO-LITHO, WASHINGTON, D. C.

## United States Patent Office.

THOMAS J. MURPHY, OF MONTREAL, CANADA.

## SYSTEM OF ARMATURE-WINDING.

SPECIFICATION forming part of Letters Patent No. 685,290, dated October 29, 1901.

Application filed May 4, 1901. Serial No. 58,746. (No model.)

To all whom it may concern:

Be it known that I, Thomas J. Murphy, a subject of the King of Great Britain, residing at Montreal, in the county of Hochelaga, Province of Quebec, Canada, have invented new and useful Improvements in Systems of Armature-Winding, of which the following is a specification.

My invention relates to improvements in formed or machine-wound coils wherein the outer span of the coils is some multiple, or nearly so, of the inner span, necessitating the former being placed on the armature in two or more layers, resulting in an easily-wound armature, easily repaired and economical of space. I attain these objects by the arrangement illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of part of the winding as adapted to a slotted core of a fourpole motor. Fig. 2 is a top view of the same. Similar letters refer to similar parts through-

out both views.

In the drawings the two sizes of coils used are shown. The coils A B span in the present application nearly a quarter of the circumference of the armature, and the distance

from twist CD to slots EF is twice the distance from CD to GH. The coil A and every succeeding alternate one are made wide enough 30 from point C to E to lie on the outer side of coil B. The coils are practically all of the same dimension between GH and CD.

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

1. In a system of armature-winding the combination of formed or machine-wound coils so arranged that the outer span of the coils is some multiple or nearly so of the inner portion, necessitating the outer span being two 40 or more layers in width, substantially as described.

2. In a system of armature-winding the combination of two sizes of coils A, B, of the portion between C E and D F being twice that 45 between G C and H D, of the part between C and E being made sufficiently wide to admit of being placed on the outside of portion between D and F as shown and described.

THOMAS J. MURPHY.

Witnesses:

B. J. BARRETT,

L. C. MURPHY.