(No Model.) 2 Sheets—Sheet 1.

A. M. A. BEALE.

INDUCTION COIL.

No. 342,947. Patented June 1, 1886.

Fig. 1.

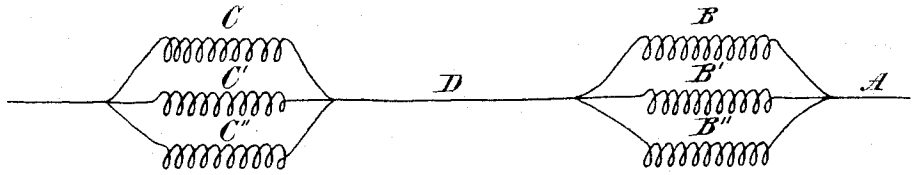
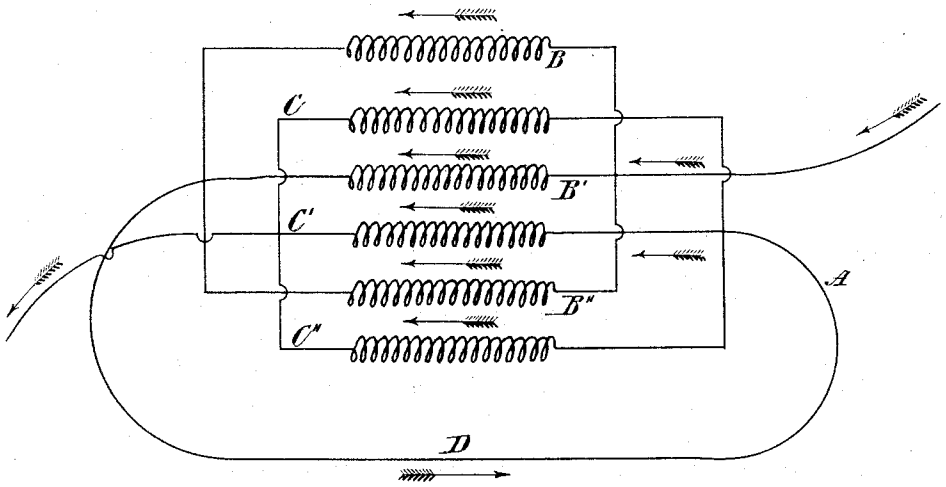


Fig. 2.



WITNESSES:

Gustave Dieterich

Edgar Goodwin

INVENTOR

Alfred M. A. Beale

BY Park Benjamin

his ATTORNEY

N. PETERS, Photo-Lithographer, Washington, D. C.

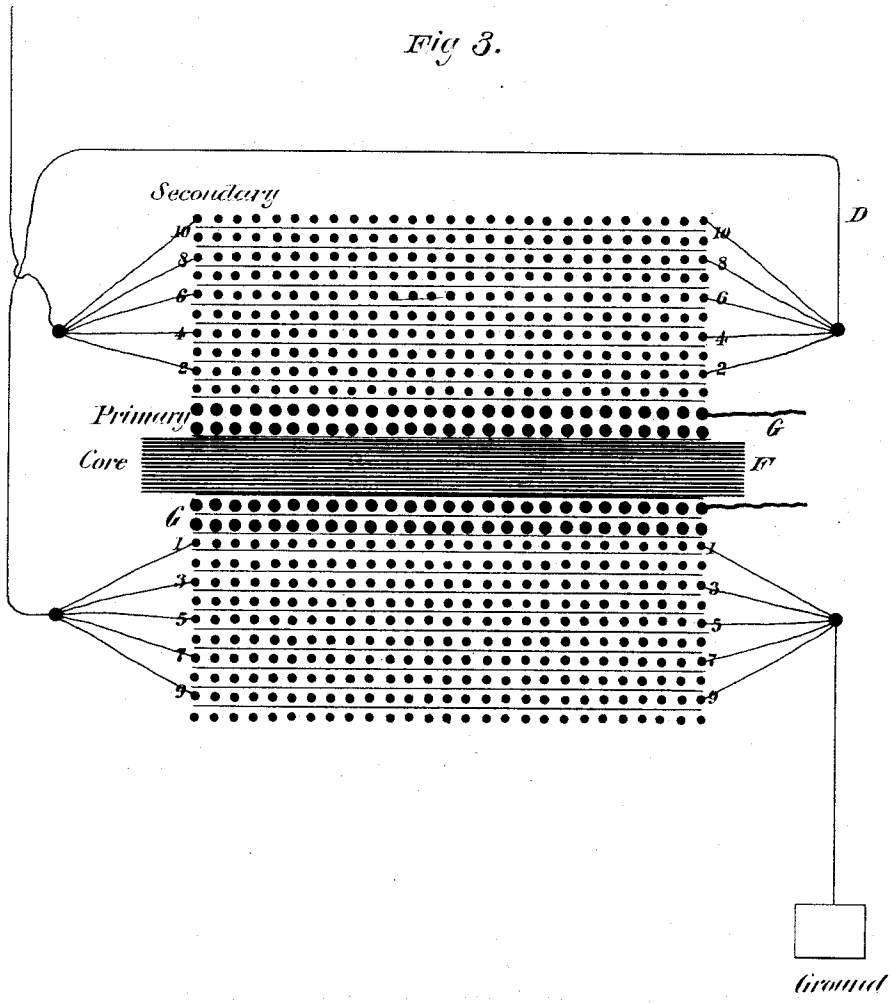
(No Model.) 2 Sheets—Sheet 2.

A. M. A. BEALE.

INDUCTION COIL.

No. 342,947. Patented June 1, 1886.

Fig 3.



WITNESSES
Gustave Heinrich
Fred Kuetzbach

INVENTOR
Alfred M. A. Beale
Park Benjamin
By his Attorney

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ALFRED MEYER ALBERT BEALE, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO LEMUEL B. CLARK, OF SAME PLACE, AND EDWIN R. WIGGIN, OF BOSTON, MASSACHUSETTS.

INDUCTION-COIL.

SPECIFICATION forming part of Letters Patent No. 342,947, dated June 1, 1886.

Application filed January 12, 1886. Serial No. 188,333. (No model.)

To all whom it may concern:

Be it known that I, ALFRED MEYER ALBERT BEALE, of the city, county, and State of New York, have invented a new and useful Improvement in Induction-Coils, of which the following is a specification.

My invention relates to a coil for receiving induction from or causing induction in a neighboring conductor, and in the method of constructing and construction of the same, as hereinafter more particularly set forth.

Figure 1 is a diagram illustrating the construction of my improved induction-coil. Fig. 2 is a diagram showing the disposition of the helices as arranged in Fig. 1 in the coil. Fig. 3 is a diagram showing an induction-coil constructed in accordance with Figs. 1 and 2.

Similar letters of reference indicate like parts.

I may employ several continuous conductors, A, and I may arrange the helices B and C in multiple arc in said conductor.

To illustrate, Fig. 1 represents the conductor with a set of helices, B B′ B^2, in multiple arc, and a second set of helices, C C′ C^2, also in multiple arc, the two sets being joined by the part D. I arrange these helices to form the coil in which, for example, a current is to be induced, as represented in Fig. 2. Here the helices B B′ B^2 alternate with the helices C C′ C^2. The connecting-wire D is outside of the coil, and the current passes through in the direction of the arrows. This is obviously a coil of low resistance, and is therefore especially suited to all cases where a low-resistance coil is advantageous.

In Fig. 3 I represent my invention embodied in an induction-coil such as is used, for example, in connection with a telephone-transmitter. Here F is the core and G the primary coil, wound in the usual way. The secondary wire is wound in multiple arc, as illustrated in Fig. 2. The line connects with the terminals of the helices designated by the numbers 2 4 6 8 10. The other terminals of said coils are attached to the conducting-wire D, which at its opposite extremity connects with the terminals of the helices 1 3 5 7 9, which alternate with the helices 2 4 6 8 10. The opposite terminals of the helices 2 4 6 8 10 communicate with ground.

I do not limit myself to the application of my invention to induction-coils solely, because it may well be adapted to the winding of armatures of electro-magnets. Neither do I limit myself to an induction-coil having a secondary helix constructed as hereinbefore set forth, because I may so construct the primary helix, winding the secondary helix in the usual manner, or I may arrange both secondary and primary helices according to my invention.

I claim—

A compound coil for inducing a current in or receiving a current by induction from a neighboring conductor, containing a set of helices arranged in mutiple arc in a main conductor, and a second set of helices similarly arranged in the same conductor, each helix of one set alternating with a helix of the other set, all of said helices being wound in the same direction and from the same end of the coil, substantially as described.

ALFRED MEYER ALBERT BEALE.

Witnesses:
JOHN BRICE,
PARK BENJAMIN.