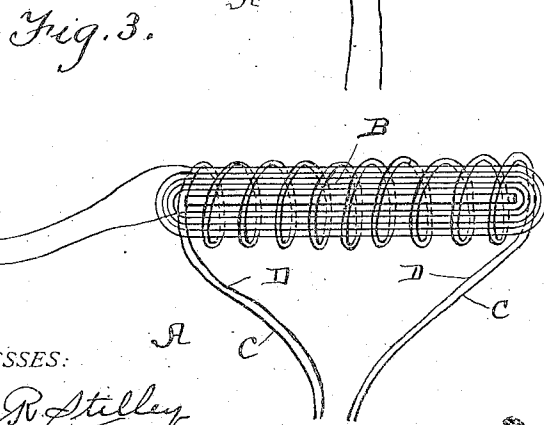
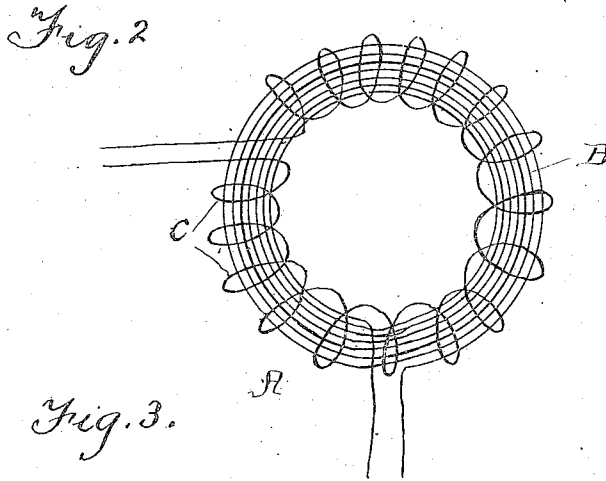
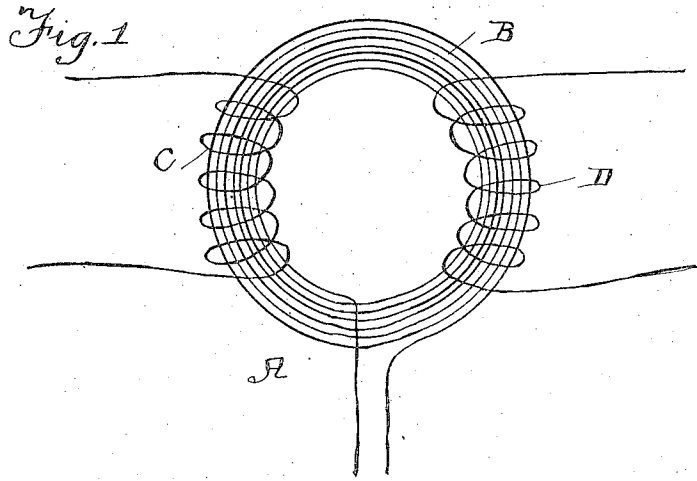


No. 847,008.

PATENTED MAR. 12, 1907.

I. KITSEE.  
CONVERTER.

APPLICATION FILED JUNE 10, 1904.



WITNESSES:

*Edith R. Stille*  
*H. C. Yeller*

INVENTOR:

*I. Kitsee*

# UNITED STATES PATENT OFFICE.

ISIDOR KITSEE, OF PHILADELPHIA, PENNSYLVANIA.

## CONVERTER.

No. 847,008.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed June 10, 1904. Serial No. 211,975.

*To all whom it may concern:*

Be it known that I, ISIDOR KITSEE, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Converters, of which the following is a specification.

My invention relates to an improvement in converters or transformers. Its object is to increase the efficiency of the inducing or transforming current.

As is well known, a transformer, such as converter or induction coil, consists of the primary adapted to be connected to the source of current to be converted, of the soft-iron core, and of the secondary adapted to be connected to consuming devices, the soft-iron core being either of solid or laminated construction, serving only for the purpose of increasing the induction by magnetic flux.

In my experiments, first with telephonic transmission and afterward with transmission of power, I have found that if the soft-iron core consists of a coil of soft-iron wire, the individual convolutions insulated from each other, this coil acts in the same manner as the secondary of a converter acts—that is, currents of electricity are generated therein by induction.

Referring to the drawing, in which Figure 1, Fig. 2, and Fig. 3 are diagrammatic views of converters embodying my invention in different forms—

A is the converter as an entirety, of which B is the iron core, composed of a series of convolutions of insulated wire in the form of a coil. C is the primary, and D is the secondary.

In Fig. 1 the converter embraces the three instrumentalities—to wit: the primary C, the secondary D, and the iron core B. In Fig. 2 the converter consists only of the primary C and the iron core B, which may be used as a secondary. Fig. 3 differs from Fig. 1 only therein that the secondary is wound around the primary. In other respects the figures are alike. If the primary C is connected with the interposition of a microphonic transmitter to a source of current, impulses in accordance with the speech to be transmitted are induced, as is well known, in the secondary D and can be heard in a telephonic receiver connected to the terminals of this coil.

Assaid above, my experiments have proven

that if to the terminals of the coil B a telephonic receiver is connected the speech can be heard as plainly as in the receiver connected to the terminals of the wire D. In other words, the core B, which till now only fulfilled the office of a magnetic core, may also fulfil the office of the secondary of an inductorium.

I do not deem it necessary to enumerate all the uses to which such an arrangement is applicable, and it suffices to say that with the proper arrangement the induced current may be taken either from the iron wire constituting the core alone or from the iron wire and the wire representing the secondary of the inductorium.

I have so far only taken into consideration the function of the third or magnetic coil as a substitute or auxiliary to secondary coils; but to persons versed in the art it is evident that with the aid of such coil a converting or inductance coil may be regulated in a manner so that either the resistance due to hysteresis or to Foucault currents may predominate, and this can readily be accomplished by making the magnetic or core coil either of very coarse wire with a few turns or of very fine wire with a comparative large number of turns.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the class described consisting of three coils, one coil adapted to be connected to the primary current, and both of the other coils adapted to be connected to consuming devices, one of the last-named two coils acting as the core for both of the other two coils.

2. An electric converter, the magnetic core of which consists of a coil of iron wire, the individual turns insulated from each other, the terminals of the iron core connected to a working circuit.

3. A converter or inductance coil provided with an iron core forming a closed magnetic circuit, said iron core consisting of a series of turns of insulated iron wire, the terminals of the iron core connected to a working circuit.

In testimony whereof I hereby sign my name, in the presence of two subscribing witnesses, this 7th day of June, A. D. 1904.

ISIDOR KITSEE.

Witnesses:

EDITH R. STILLEY,  
H. C. YETTER.