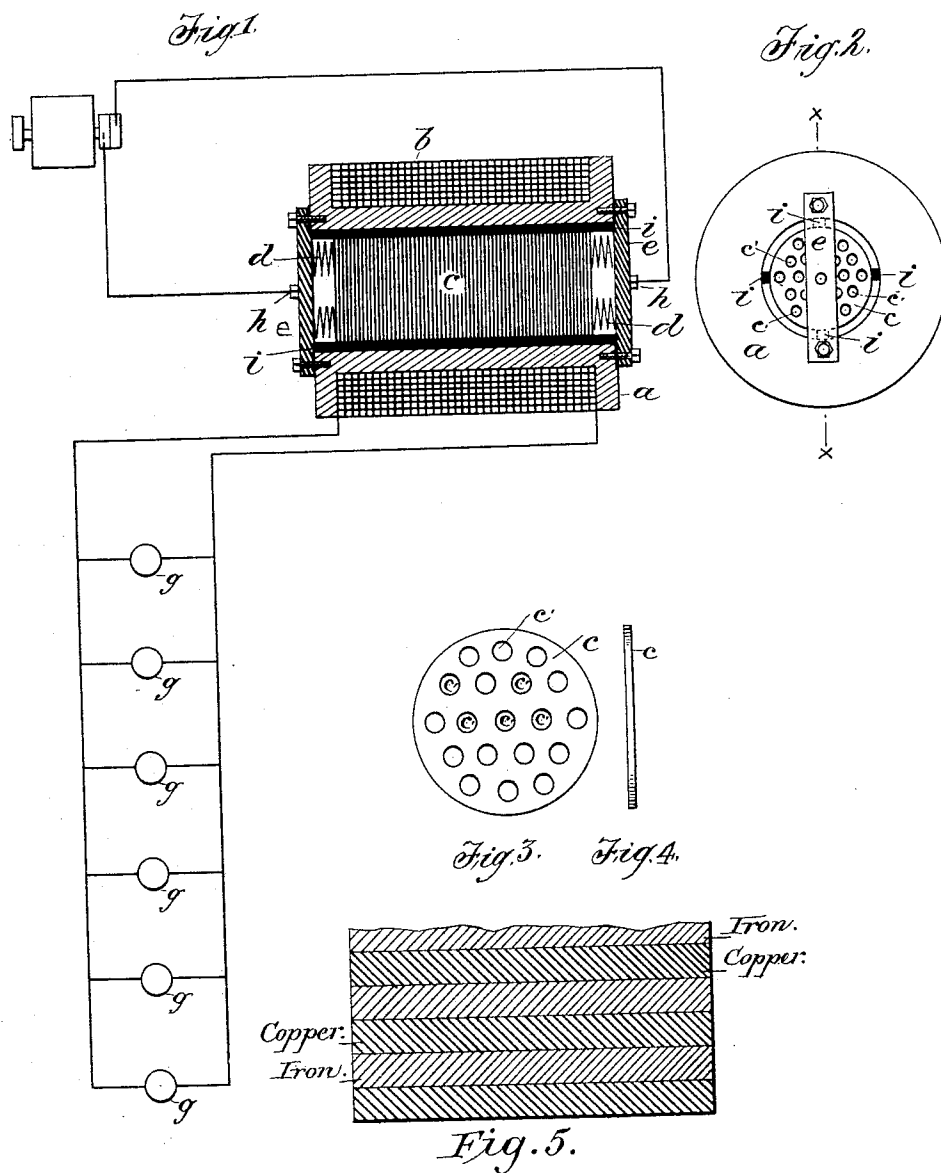


(No Model.)

E. WAGEMANN.
CONVERTER.

No. 426,153.

Patented Apr. 22, 1890.



WITNESSES:
Edw. Benjamin
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UNITED STATES PATENT OFFICE.

EDMUND WAGEMANN, OF LITTLE ROCK, ARKANSAS, ASSIGNOR OF SIX-SEVENTHS TO JOHN D. ADAMS, DEAN ADAMS, OSCAR DAVIS, JOHN W. DAVIS, HORACE G. ALLIS, AND JOHN B. JONES, ALL OF SAME PLACE.

CONVERTER.

SPECIFICATION forming part of Letters Patent No. 426,153, dated April 22, 1890.

Application filed August 22, 1889. Serial No. 321,593. (No model.)

To all whom it may concern:

Be it known that I, EDMUND WAGEMANN, a subject of the Emperor of Germany, and a resident of Little Rock, county of Pulaski, and State of Arkansas, have invented certain new and useful Improvements in a Converter, of which the following is a specification.

My invention relates to a device for converting or transforming an electric current of one potential into another and independent current of a different potential.

The object of the invention is to provide a simplified construction of mechanical details, and to acquire an increased efficiency of percentage of the second current in respect to the first.

The details are all illustrated in the sheets of drawings and the drawings are explained as follows:

Figure 1 is a longitudinal cross-sectional view of the device, showing also the electrical connections. Fig. 2 is an end elevation of the complete device. Figs. 3 and 4 are respectively the front and edge view of one of the plates forming the primary of the converter. Fig. 5 is a view showing the disks forming the primary conductor in section, the same being accompanied by words showing that they are alternately of iron or copper.

The device consists of the combination of a tubular flanged spool *a*, upon which is wound the one coil (the secondary coil of the converter, preferably) lettered *b*; thin plates *c* and *n* of copper and iron, respectively, laid and placed upon each other alternately, and located inside of the tubular spool so as to substantially occupy the larger part of the tubular space, the said plates being provided with holes *c'* as a means of ventilation; springs *d* pressing upon each end of the batch of plates *c* and *n* and resisted by bars *e*, which are fastened to the spool upon either end, and suitable electrical connections between the converter and generator *f* and translating devices *g*.

As to the operation of my invention, I may say in the first place that it has been tried in practice, and I find that by passing an al-

ternating current to the two terminals *h*, which are electrically connected to the copper and iron plates, (which are in electric contact with one another,) a secondary current is successfully induced and produced in the secondary circuit, and that the translating devices become operative. As to the exact electrical operation of the plates to produce this phenomenon, I am not positively sure; but I think that it is due to a kind of condenser action between the two kinds of conducting metals—namely, iron and copper. Before the means of ventilation were provided the action was so marked that the heat developed was considerable.

It is thought that the maximum efficiency may be obtained with the two metals, iron and copper.

The plates *c* and *n* are separated from the inner surface of the spool by means of strips of insulation *i*. The relative locations of the plates and secondary coil in respect to each other are that the planes of the plates are perpendicular to the axis of the coil.

The material of the springs *d* and of the plates or bars *e* is metal, for the purpose of having the function of electric conductivity.

I claim as my invention—

1. An electric converter consisting of the combination of a secondary coil, and a primary conductor consisting of superposed plates of copper and iron arranged alternately with one another and surrounded by the said secondary coil, the axis of the said coil being perpendicular to the planes of the said plates.

2. In an electric converter, the combination of a tubular flanged spool, upon which is wound the one coil of the converter, thin plates of iron and copper placed upon each other alternately and located inside of the said spool, the said plates being provided with holes, springs pressing upon each end of the batch of plates named, and bars pressing upon the opposite ends of the said springs and fastened to the said spool at opposite ends thereof.

3. In an electric converter, the combination

of plates of iron and copper arranged alternately upon each other and in electric contact, a spool in which the said plates are contained and from which they are separated by
5 suitable insulation, and a coil of electric conductor wound upon said spool.

In testimony that I claim the foregoing as

my invention I have signed my name, in presence of two witnesses, this 21st day of August, 1889.

EDMUND WAGEMANN.

Witnesses:

E. G. DUVALL, Jr.,

EDWARD P. THOMPSON.