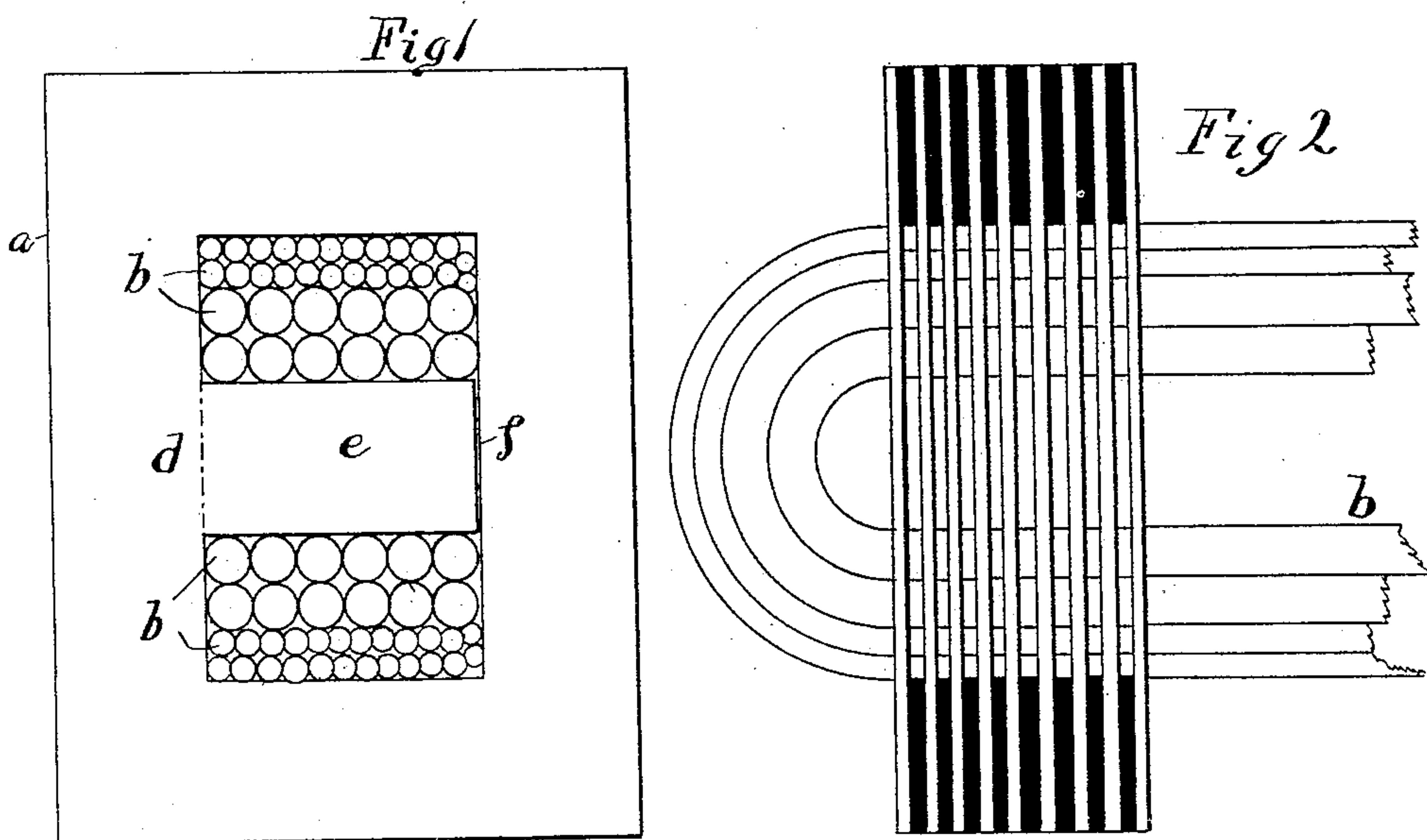


(No Model.)

L. GUTMANN.
ELECTRIC CONVERTER.

No. 397,910.

Patented Feb. 19, 1889.



Attest,
Agnes S. Vales,
Jacob Mannheim.

Inventor,
Ludwig Gutmann,
By his Attorney,
Edward P. Thompson.

UNITED STATES PATENT OFFICE.

LUDWIG GUTMANN, OF NEW YORK, N. Y.

ELECTRIC CONVERTER.

SPECIFICATION forming part of Letters Patent No. 397,910, dated February 19, 1889.

Application filed April 26, 1888. Serial No. 271,877. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG GUTMANN, a subject of the Queen of Great Britain, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Electric Converters, of which the following is a specification.

My invention relates to the construction of an electric converter for changing the electromotive force of currents.

The object of the invention is to simplify the device in such a manner as to reduce the cost of manufacture.

In the construction of electric converters it is usual to build up the cores of iron plates or sheets. Each sheet contains one or more perforations, through which the coils pass. In order to get the coils in the perforations it has been necessary to cut the plate from the outside edge to the perforations in two places. By my invention the plate or sheet has but one cut.

The invention is described by reference to the accompanying drawings.

Figure 1 is a view of one of the sheets, and Fig. 2 is an edge view of several similar sheets insulated from each other, as they would be in the construction of a converter.

In both figures a portion of the coil is shown. The coil is represented as made of two different-sized wires, indicating, respectively, the primary and secondary wire or conductor.

Referring to Fig. 1, the sheet consists of a rectangular plate, *a*, containing two rectangu-

lar perforations or similar openings for holding the coil *b*, which is formed of two independent conductors. A single cut, *f*, or opening is made from one perforation to the other, so that the cross-piece *c*, separating the two perforations, may be bent away at the dotted line *d* and the plate slid over the coil. Subsequently the said cross-piece, which is lettered *e*, is bent back again into its original position.

I claim as my invention—

1. An element for the core of an electric converter, consisting of an iron plate provided with two openings which contain the coil and with a cut or slit which connects the two openings.

2. An electric converter consisting of the combination of a coil surrounded by an uncut iron plate perpendicular to the axes of the conductors forming the coil and an iron cross-piece passing through the center of the coil and connected at one end to the said iron plate.

3. An element for an electric converter, consisting of a sheet of iron suitably perforated and provided with a single cut between the perforations for the entrance of the converter's coil.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 10th day of April, 1888.

LUDWIG GUTMANN.

Witnesses:

EDWARD P. THOMPSON,
HAL BELL.