

C. W. EISENMANN.
COMBINATION MAGNETIC AND ELECTRIC POLARITY INDICATOR.
APPLICATION FILED AUG. 16, 1919.

1,344,388.

Patented June 22, 1920.

Fig. 1

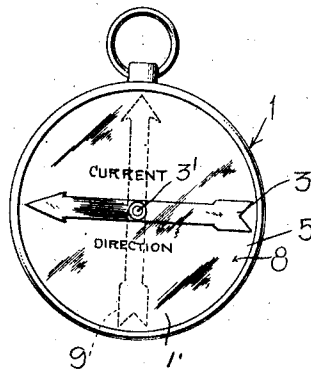


Fig. 2

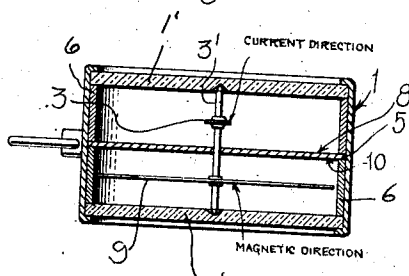
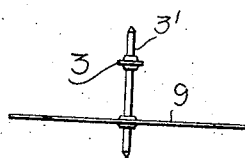


Fig. 3



Inventor
C. W. Eisenmann

By Frankl. N. Noyes
Attorneys

UNITED STATES PATENT OFFICE.

CARL W. EISENMANN, OF NEBRASKA CITY, NEBRASKA.

COMBINATION MAGNETIC AND ELECTRIC POLARITY-INDICATOR.

1,344,388.

Specification of Letters Patent.

Patented June 22, 1920.

Application filed August 16, 1919. Serial No. 318,000.

To all whom it may concern:

Be it known that I, CARL W. EISENMANN, a citizen of Germany, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Combination Magnetic and Electric Polarity-Indicators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in combination magnetic and electric polarity indicators, and consists essentially in the provision of a modified compass, with a plurality of indicating needles, one of which is non-magnetic and so directed relative to the magnetic needle as to indicate directly the direction of the flow of an electric current.

My invention consists of a simple and efficient device of this nature, having various details of construction, combination and arrangement of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings which, with the letters of reference marked thereon, form a part of this application, and in which:

Figure 1 is a plan view of my polarity indicator.

Fig. 2 is a cross sectional view through the same, and

Fig. 3 is a detail view.

Reference now being had to the details of the drawings by numerals:

1 designates a cylindrical casing having a glass face 1' at each end, said cylindrical casing having two spacing rings 6 therein, engaging at their inner edges a dial having double faces 8 and 10, and at their outer edges supporting the glass faces 1', and 1', as shown clearly in Fig. 2 of the drawings.

Said dial is centrally apertured to receive the staff or pin 3', and upon said staff are mounted two needles, designated respectively by numerals 3 and 9, at right angles to each other and spaced apart upon either side of said dial. The ends of said pin have bearings in sockets formed in the inner sides of the glass faces.

On the side of the dial facing the magnetic needle are printed the words "Magnetic direction," and upon the other side of the dial and facing the non-magnetic needle appear the words "Current direction." These needles have definite and fixed relative directions, so that when viewed from the end of the staff adjacent the non-magnetic needle, the magnetic needle will point north and the other west.

By this arrangement, the needles will have definite fixed directions according to the law of relation between the direction of a current in the wire and the magnetic field surrounding the wire. For instance, when the instrument is placed over a wire carrying direct current, the non-magnetic needle will point directly in the direction of the flow of the electric current, thereby producing an electric polarity indicator in addition to a magnetic polarity indicator.

By placing the non-magnetic needle in a particular fixed direction, so that it points out directly the direction of an electric current, a novel means is provided.

What I claim to be new is:

The combination of a magnetic and electric polarity indicator, comprising a casing, a balanced rotatable element consisting of a magnetic and a non-magnetic needle rigidly secured to a spindle mounted rotatably in bearings, an individual dial for each needle, said needles being positioned at right angles to each other in a particular fixed direction, so that they respectively indicate the direction of a magnetic field and of an electric current.

In testimony whereof I hereunto affix my signature.

CARL W. EISENMANN.