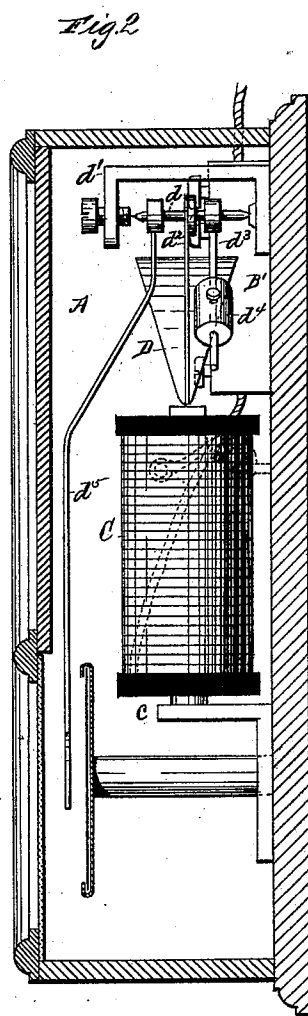
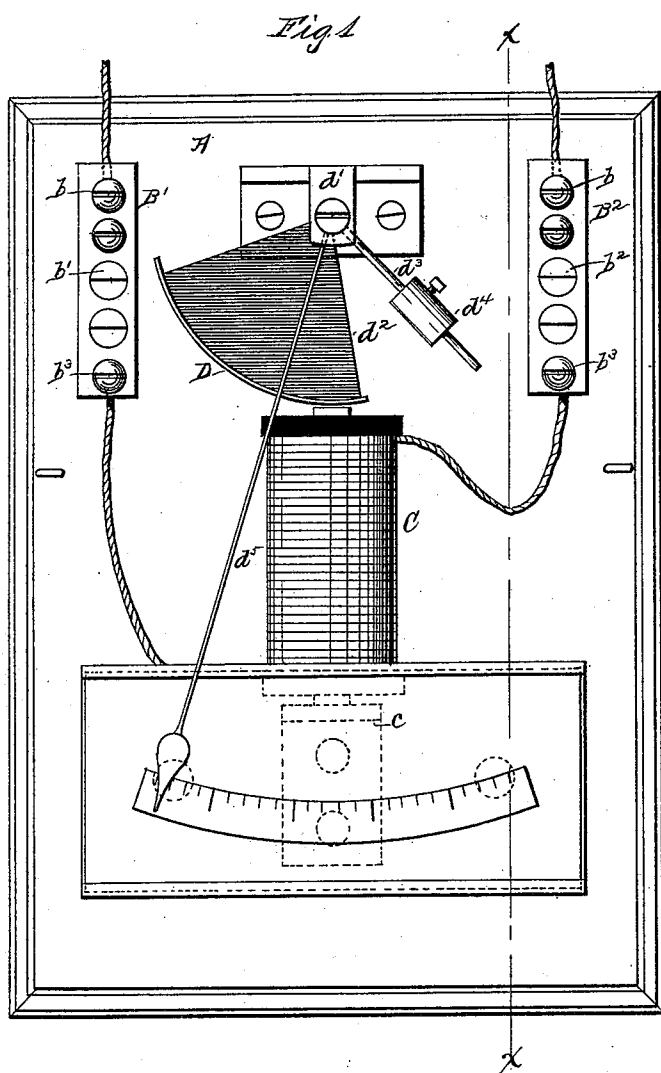


(No Model.)

S. BERGMANN & G. A. SCOTT.
GALVANOMETER.

No. 472,026.

Patented Apr. 5, 1892.



Witnesses
C. R. Farnham
Wm. M. Cliff

Inventors:
Sigmund Bergmann
George A. Scott
By their Attorney
Edwin H. Brown

UNITED STATES PATENT OFFICE.

SIGMUND BERGMANN AND GEORGE A. SCOTT, OF NEW YORK, N. Y., ASSIGNORS, BY MESNE ASSIGNMENTS, TO THE INTERIOR CONDUIT AND INSULATION COMPANY, OF SAME PLACE.

GALVANOMETER.

SPECIFICATION forming part of Letters Patent No. 472,026, dated April 5, 1892.

Application filed February 25, 1891. Serial No. 382,691. (No model.)

To all whom it may concern:

Be it known that we, SIGMUND BERGMANN and GEORGE A. SCOTT, both of New York, in the county and State of New York, have invented a certain new and useful Improvement in Electrical Meters, of which the following is a specification.

Our improvement is applicable to an Ampère meter or a voltmeter.

We will describe an instrument embodying our improvement and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a front view of an instrument embodying our improvement, the box or case being removed. Fig. 2 is a vertical section taken at the plane of the dotted line $x x$, Fig. 1, with the box or case in place.

Similar letters of reference designate corresponding parts in all the figures.

A designates a base-piece, which may advantageously be made of wood. On its face are mounted two blocks $B' B^2$ of electrical conducting material, such as brass. These blocks may be fastened to the base-piece by screws $b' b^2$, passing through them and engaging with the base-piece. The wires of an electric circuit—as, for instance, an electric-lamp circuit—will be connected with the blocks $B' B^2$ —as, for instance, by being inserted in holes formed in the upper ends of the blocks and clamped in said holes by screws b , passing horizontally through the outer portion of the blocks and entering said holes.

C designates an electro-magnet, which is here shown as made in the form of an ordinary bar-magnet. It is supported upon a bracket c , fastened to the front of the base-piece A. One end of its coils is connected with the block B' and the other end thereof with the block B^2 . The connection may be made by inserting the ends of the wire forming the coils into holes provided in the lower ends of the blocks and clamping them in the holes by means of screws b^3 .

D designates a strip of metal, which is sup-

ported by a shaft d . It is longitudinally curved, so as to be concentric with said shaft, and it is gradually widened or extended transversely from one end to the other. The narrower end will be normally over the pole of the magnet C, and the central line of the strip will be in the same vertical plane with the center of the magnet core or bar. The shaft d is journaled in bearings in a bracket d' , fastened to the base-piece A. The connection between the strip D and the shaft d consists of a segmental piece d^2 of non-magnetic material. From the shaft d an arm d^3 extends radially, and near the lower end is provided with an adjustable weight d^4 . The arm and the weight may be made of brass. It will be seen that the arm d^3 extends at an angle to the segmental piece d^2 . From the shaft d extends a needle d^5 , and this is at an angle with the arm d^3 . The relation of the arm d^3 and its weight d^4 to the other parts supported by the shaft is such that the strip D will be maintained with its narrow end portion just above the pole of the magnet C, as shown in the drawings.

Variations occurring in the strength of the current, an increase will cause the strip D to be moved longitudinally over the pole of the magnet. When there is a decrease in the strength of the current, the weighted arm d^3 will move the strip D in the reverse direction. These movements will cause the needle to travel over a scale E, which is supported from part of the base-piece A.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In an electrical meter, the combination of a magnet, a metal strip longitudinally curved and gradually widened from one end to the other and supported adjacent to the pole of said magnet, and a weight or its equivalent for moving the strip in the reverse direction to that in which it would be moved by the magnet, substantially as specified.

2. In an electrical meter, the combination of a magnet C, a metal strip D, longitudinally

curved and widened gradually from one end
toward the other, a segmental piece of non-
magnetic material d^2 , supporting said strip
adjacent to the pole of the magnet, a shaft d ,
5 to which the said segmental piece is fastened,
an arm d^3 , and a weight d^4 , substantially as
specified.

In testimony whereof we have signed our

names to this specification in the presence of
two subscribing witnesses.

SIGMUND BERGMANN.
GEORGE A. SCOTT.

Witnesses:

JNO F. GEIDEL,
P. H. KLEIN, Jr.