

(No Model.)

P. BRANDT.
VOLTMETER.

No. 577,678.

Patented Feb. 23, 1897.

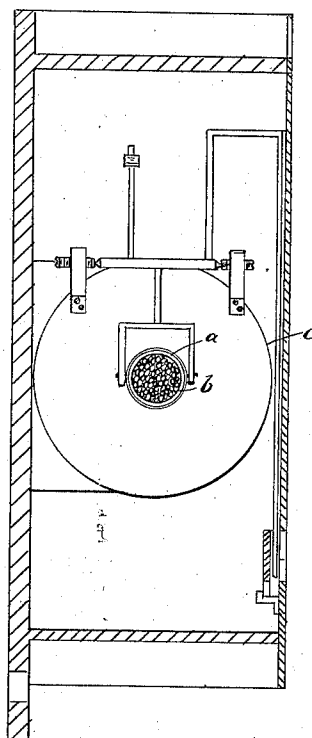


Fig. 1.

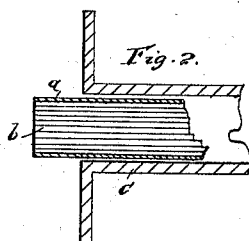


Fig. 2.

WITNESSES:

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munz
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UNITED STATES PATENT OFFICE.

PAUL BRANDT, OF BERLIN, GERMANY, ASSIGNOR TO ANTON HEUSCH, OF
SAME PLACE.

VOLTMETER.

SPECIFICATION forming part of Letters Patent No. 577,678, dated February 23, 1897.

Application filed August 6, 1896. Serial No. 601,923. (No model.)

To all whom it may concern:

Be it known that I, PAUL BRANDT, of Berlin, in the Kingdom of Prussia and Empire of Germany, have invented a new and Improved Voltmeter, of which the following is a full, clear, and exact description.

My invention relates to voltmeters, and has for its object to secure accurate indications with such apparatus.

10 Voltmeters as ordinarily constructed do not give accurate indications on account of the remanent magnetism of the iron core actuated by the solenoid. In order to avoid this defect, I substitute for the solid iron core used
15 hitherto a sleeve of soft iron containing a bundle or cluster of wires. There is a mutual induction between the sleeve and the cluster of wires, whereby the remanent magnetism of the sleeve is completely neutralized.

20 The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

25 Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

30 Figure 1 is a sectional view showing part of a voltmeter constructed according to my invention, and Fig. 2 is a broken sectional plan of the solenoid with the improved core.

35 In the drawings I have not illustrated all the parts of the voltmeter, since my invention relates only to the core of the solenoid, and the other parts may be constructed as usual.

A soft-iron sleeve *a* is substituted for the ordinary solid iron core and is actuated in the well-known manner, being drawn into the spool or bobbin *c* of the solenoid and being connected to an index or pointer in any suitable manner. Within the sleeve *a* is contained a bundle or cluster of wires *b*. With a decrease in the tension the remanent magnetism of the wires *b* will act in such a manner on the sleeve *a* that the remanent magnetism of the latter will be neutralized, the forces being approximately equal, but of opposite directions. I have ascertained by experiments that with a solenoid-core constructed as above described all errors due to remanent magnetism are eliminated.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A core or armature for solenoids, comprising a soft-iron sleeve, and a bundle or cluster of wires contained therein, as and for the purpose set forth.

2. In a voltmeter, a solenoid, a movable core consisting of a soft-iron sleeve and a cluster or bundle of wires contained therein, and an indicator actuated by the movement of the core, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

PAUL BRANDT.

Witnesses:

PEREGRINE VARNALS,
HANS HITZEROTH.