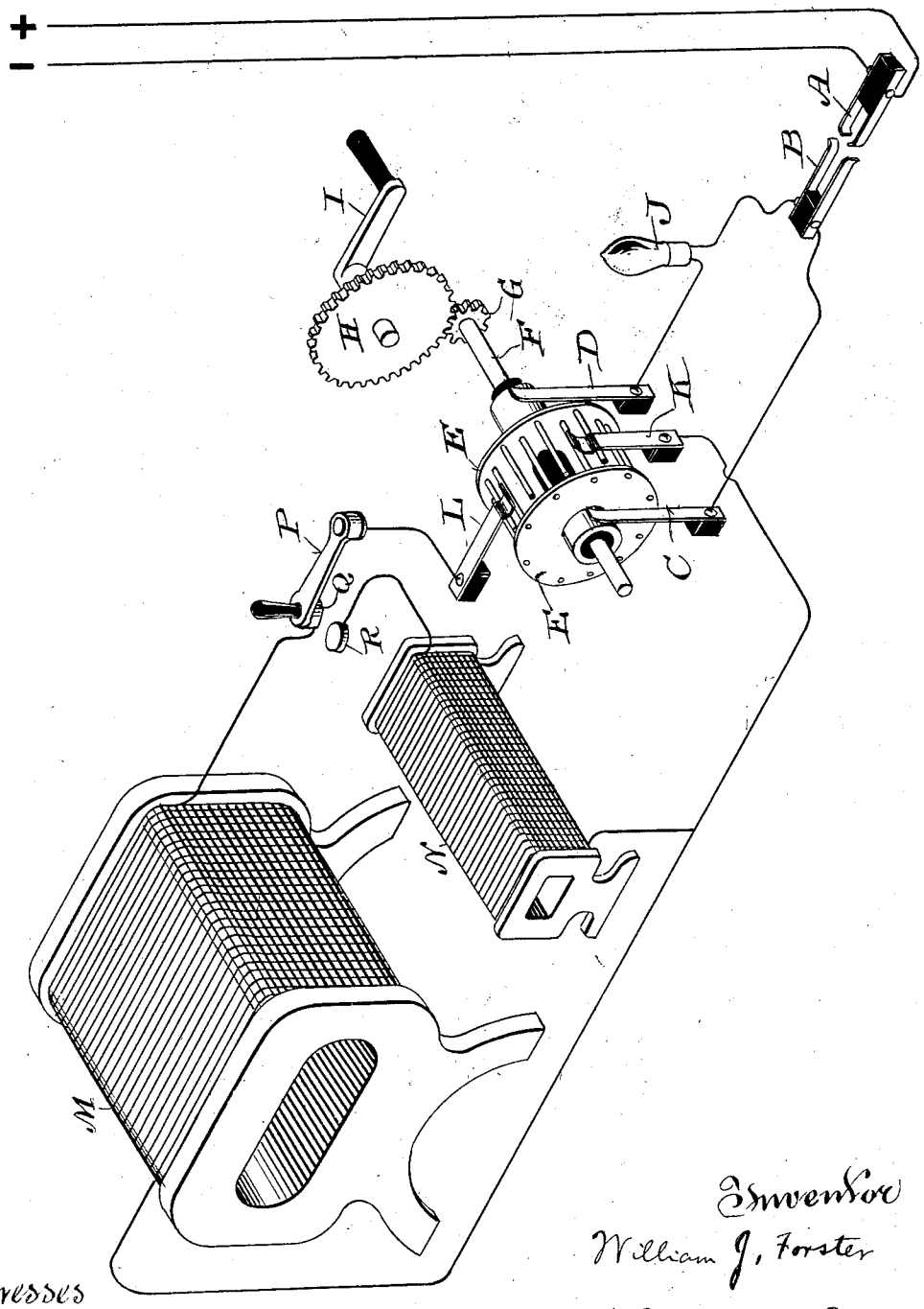
No. 733,637. PATENTED JULY 14, 1903.

W. J. FORSTER.

DEMAGNETIZER.

APPLICATION FILED MAR. 15, 1902.

NO MODEL.



Witnesses
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No. 733,637. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM J. FORSTER, OF MILWAUKEE, WISCONSIN.

DEMAGNETIZER.

SPECIFICATION forming part of Letters Patent No. 733,637, dated July 14, 1903.

Application filed March 15, 1902. Serial No. 98,278. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. FORSTER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Demagnetizers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple economical apparatus having utility with an electrical current of sufficient intensity as means for demagnetizing various devices, especially watches and tools, said invention consisting in what is hereinafter particularly set forth with reference to the accompanying drawing and subsequently claimed.

The drawing is a diagram in perspective, illustrating electric-service conductors and apparatus in accordance with my invention for electrical connection with said conductors.

Referring by letter to the drawing, A indicates a spring-plug connecting positive and negative conductors of an electric-service line, and B another such plug connecting local-circuit conductors having insulated spring-brush terminals C D, the latter plug being engageable with the one aforesaid to energize the local circuit. The brushes C D have contact with the hub portions of a pair of wheels E, of conductor material, in rigid insulated connection with a spindle F, provided with a pinion G, that meshes with a spur-wheel H, that is turned by a crank I to impart rapid rotation to the wheels, an incandescent lamp J or other resistance being put in the circuit. Each wheel E is provided with an even-number series of inwardly-projecting contact-pins at intervals of a circle, those of one wheel alternating with those of the other. Insulated spring-brushes K L have cam end opposition to the pins of the wheels E, and the arrangement of these brushes is such that they are alternately in contact with a pair of pins of each wheel when both are in rotation, the function of the two pin-wheels on the same spindle being that of a pole-changer. Brush K is electrically connected to hollow-core electromagnets M N of different uses, and the brush L is electrically connected to an electric switch P, that may be closed on one or the other of electric contact-points Q R, one of these points being electrically connected to electromagnet M and the other in like connection with electromagnet N. Hence either of these electromagnets can be readily put in circuit with the pole-changer.

In practice the local circuit is closed with conductors of the electric-service line or with a generator of sufficient electric current, and one or the other hollow-core electromagnets is put in the circuit by means of the switch, the pole-changer being then actuated to cause frequent reverses of the direction of current that goes through said magnet. Each brush K L is alternately on contact-pins of both wheels E and a contact-pin of one of said wheels. Hence there is alternate shunting and energization of the magnet, the frequency of the alternations being in proportion to the rotary speed of the pole-changer and number of the contact-pins thereof, this number being always preferably such as will insure a cool pin of each wheel at each contact with a brush. Shunting of the magnet throws pressure of the current into the lamp J or other resistance to prevent the damaging sparking that would otherwise take place between pole-changer pins and the brushes K L, due to alternations of said current. Hence the durability of the pole-changer is insured. The lamp J as a resistance being always included in the circuit will have full power when the magnet is shunted, but less power when said magnet is energized, the current being then divided in said lamp and magnet, there being constant flickering of the aforesaid lamp when the pole-changer is in operation. A watch, tool, or other device that has become magnetized is placed in the hollow core of the electromagnet that is for the time in the circuit aforesaid and demagnetized as a result of the above-described operation, there being continuous actuation of the pole-changer while the device under treatment is exposed in said electromagnet. The larger electromagnet M is designed for watches and the one N for narrow tools; but either one of said electromagnets may be omitted and the one remaining put in permanent electroconnection with the brushes

that oppose the pole-changer without departure from what I seek to cover as my invention.

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

1. A demagnetizer comprising a hollow-core electromagnet, a pair of conductor-wheels insulated on a common spindle and each provided with inwardly-extending contact-pins at intervals of a circle, the pins of one wheel alternating with those of the other, cam end spring-brushes each alternately in touch with contact-pins of both wheels and a single pin of one wheel, means for electrically connecting said brushes and magnet, means for rotating the spindle, other brushes in contact with said wheels, the latter brushes constituting terminals of a circuit for electric current of suitable intensity, and a resistance in the circuit.

2. A demagnetizer apparatus comprising a plurality of hollow electromagnets different in matter of size, a pair of conductor-wheels insulated on a common spindle and each provided with inwardly-extending contact-pins at intervals of a circle, the pins of one wheel alternating with those of the other, cam end spring-brushes each alternately in touch with the contact-pins of both wheels and a single pin of one wheel, a switch arranged to close an electrical circuit including either of said magnets and said brushes, means for rotating said spindle, other brushes in contact with said wheels, the latter brushes constituting terminals of a circuit for electric current of suitable intensity, and a resistance in the circuit.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

WILLIAM J. FORSTER.

Witnesses:
H. G. UNDERWOOD,
W. S. UNDERWOOD.