

(Model.)

J. W. WEAKLEY, Jr.
ELECTRIC BRUSH.

No. 260,718.

Patented July 4, 1882.

Fig. 1

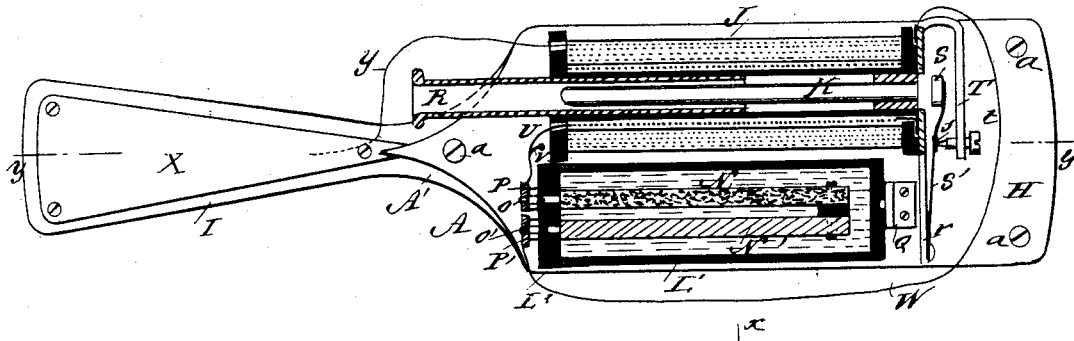


Fig. 2

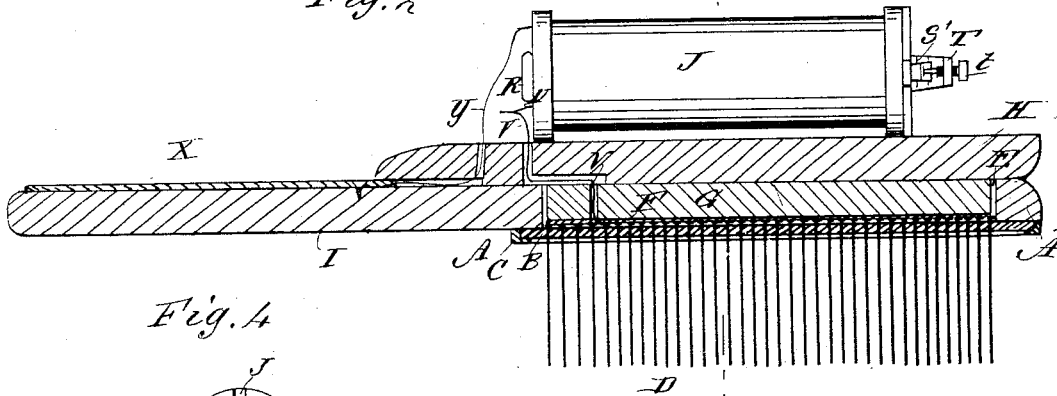


Fig. 4

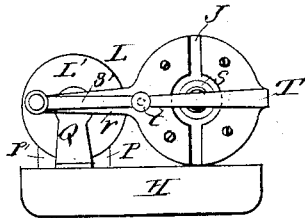


Fig. 3.

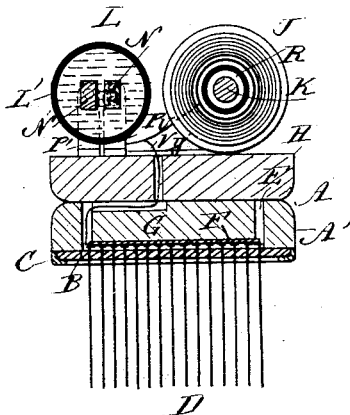
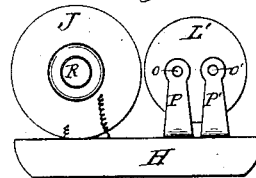


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN W. WEAKLEY, JR., OF BOND HILL, OHIO.

ELECTRIC BRUSH.

SPECIFICATION forming part of Letters Patent No. 260,718, dated July 4, 1882.

Application filed December 9, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN W. WEAKLEY, Jr., of Bond Hill, in the county of Hamilton and State of Ohio, have invented a new and Improved Electric Brush, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved electric brush to be used for the relief of nervous complaints, &c.

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

Figure 1 is a plan view of the upper side of my improved electric brush, parts being shown in section. Fig. 2 is a longitudinal sectional elevation of the same on the line *yy*, Fig. 1. Fig. 3 is a cross-sectional elevation of the same on the line *xx*, Fig. 2. Fig. 4 is an end elevation of the top plate and the battery and coil thereon. Fig. 5 is a view in elevation of the handle end of the brush.

The brush *A* has a rubber or other suitable facing, *B*, held in place by a metal-flanged frame, *C*, and this facing *B* is studded with metal pins *D*, passed through it, the pin-heads remaining on the inner side of the facing in the manner in which brushes with metal pins are generally constructed. The back *A'* of the brush is provided with a recess, *E*, into which a copper or other metal plate, *F*, is placed to rest on the heads of the pins *D*, this plate *F* being held in place by a wooden filling-block, *G*, fitting in the recess *E*.

A top plate, *H*, is secured on the upper surface of the back *A'* by means of screws *a*, and this top plate carries an induction coil, *J*, provided with a core, *K*, and the top plate, *H*, also carries a battery, *L*, composed of a cell, *L'*, of glass, porcelain, or rubber, provided with a screw-cap, *L²*, to which the carbon element *N* and the zinc element *N'* (or any other suitable elements) are attached, the elements each being provided with pins or studs *O O'*, projecting through the top of the screw-cap *L²* and fitting in apertures in the spring-standards *P P'*, between which and a standard, *Q*, the battery or cell is held, the spring-standards *P P'* pressing against one end of the cells *L'* and the standard *Q* holding the other end. A sleeve, *R*, or regulator, fits over the core *K* of the coil

J, and can be passed a greater or less distance into the coil.

An armature, *S*, of the kind generally used with induction-machines is combined with the coil *J*, and need not be described.

The standard *P* is connected by a wire, *U*, with the coil *J* and with a branch wire, *V*, of the wire *U* by the metal plate *F*. The arm *T* of the coil is connected by a wire, *W*, with the spring-standard *P'*. The coil *J* is connected with a metal plate, *X*, on the handle *I* of the brush by a wire, *Y*.

The cell *L'* can be removed very conveniently from between the spring-standards *P P'* and the standard *Q*, and if the cap *L²* is unscrewed the elements *N N'* can be removed and any suitable solution or exciting-fluid can be poured into the cell.

The electric circuits are as follows: The current passes from the carbon element *N* through the pin *O*, the spring-standard *P*, the wire *U*, the coil *J*, the arm *T*, the spring *S'*, the contact-button *s*, the contact-screw *t*, the curved arm *T*, the wire *W* to the spring-standard *P'*, the pin *O'*, and the zinc element *N'*. The core *K* is magnetized and attracts the armature *S*, causing an interruption of the current as the contact between the button *s* and screw *t* is broken; but the moment this contact is broken the spring *S'* tears the armature *S* from the core *K*, which is demagnetized at that moment, and a vibrating current is thus obtained. If the plate *X* on the handle *I* is in contact with one hand, and if the pins *D* are brought in contact with the body, the circuit will be closed, and the extra current passes from the coil *J* through the wire *Y* to the plate *X*, the body, the pins *D*, the plate *F*, the wires *V* and *U* to the coil *J*. By drawing the regulator *R* out of the coil a greater part of the core will be exposed and the current will be augmented correspondingly.

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

1. The combination, with the brush *A*, provided with metal pins *D*, of the battery *L*, the coil *J*, and the metal plate *F*, resting on the heads of the pins *D* and connected with the battery and coil, substantially as herein shown and described, and for the purpose set forth.

2. The combination, with the brush *A*, pro-

vided with metal pins D, of the battery L, the coil J, the metal plate F, resting on the heads of the pins D and connected with the coil, and of the metal plate X on the handle and connected with the coil, substantially as herein shown and described.

3. In an electric brush, the combination, with a battery, of spring-standards for holding it removably on the brush, substantially as herein shown and described, and for the purpose set forth.

4. In an electric brush, the combination, with the battery L, provided with projecting pins or studs O O', connected with the elements of the couple, of the apertured spring-standards P P', connected with the coil J, and of the standard Q, substantially as herein shown and described, and for the purpose set forth.

JOHN W. WEAKLEY, JR.

Witnesses:

J. F. BOROFF,

JNO. A. TRIMBLE.