

(No Model.)

A. STANTON.  
ELECTRIC HAIR BRUSH.

No. 462,599.

Patented Nov. 3, 1891.

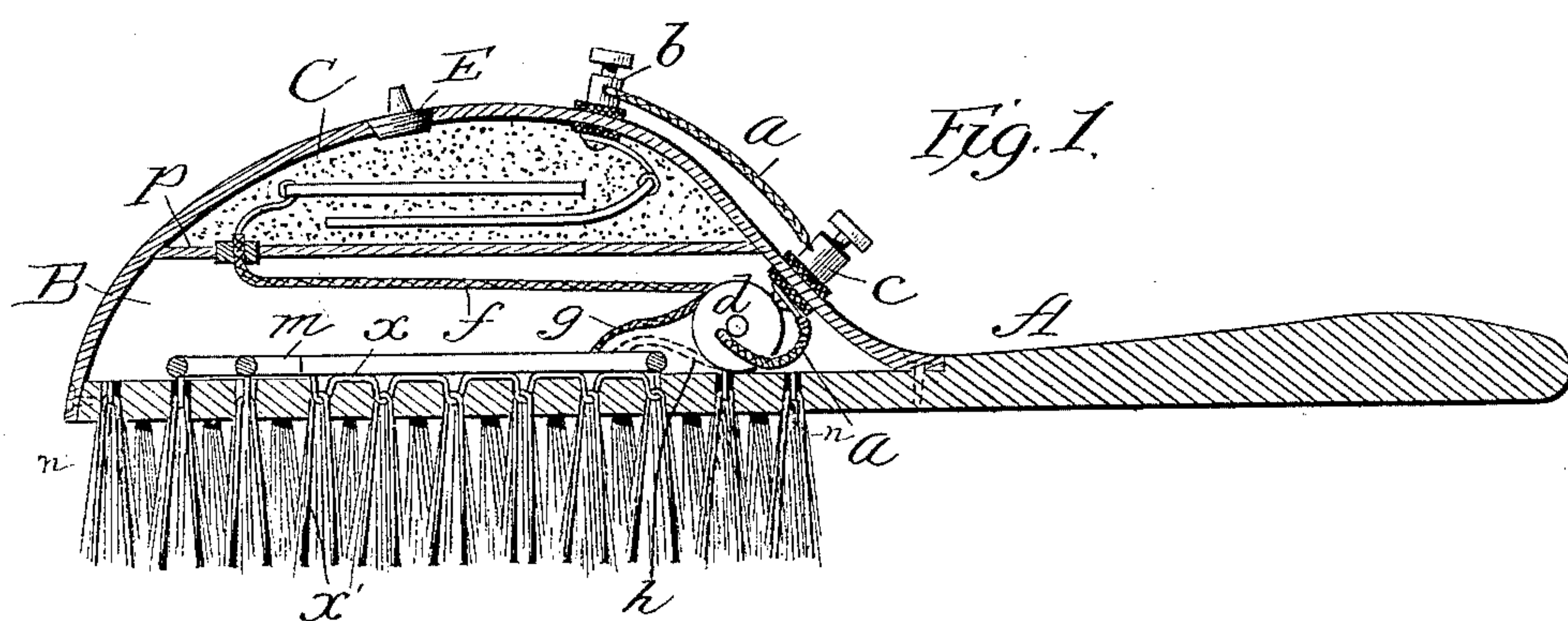
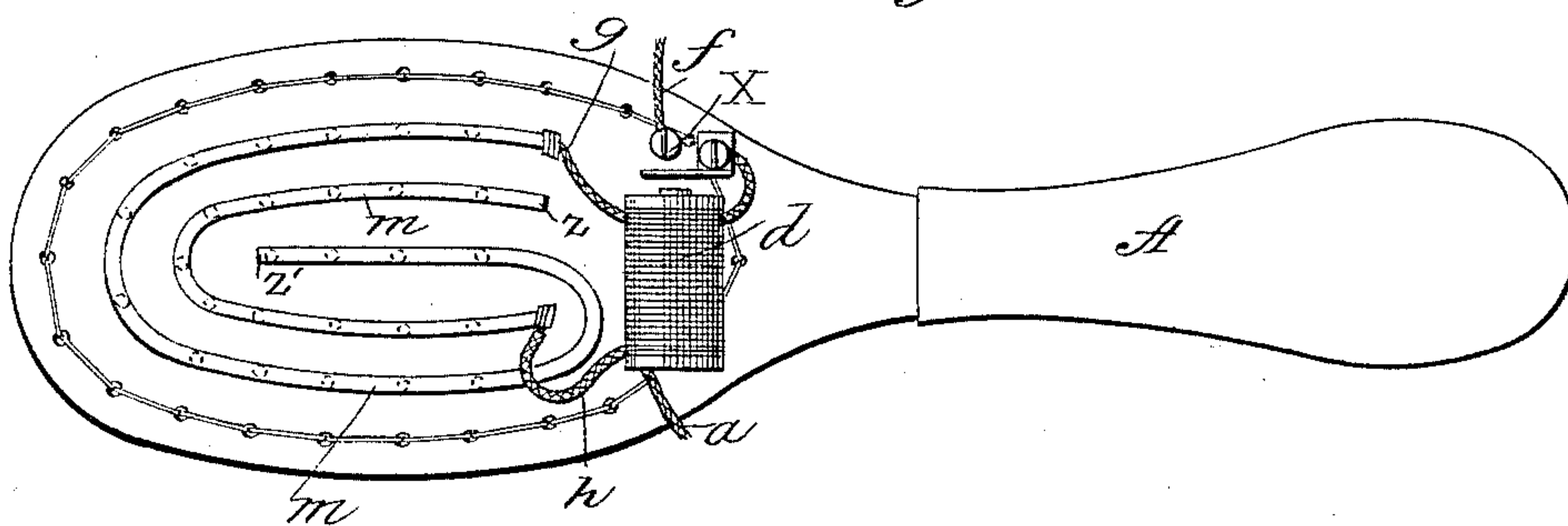


Fig. 2:



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# UNITED STATES PATENT OFFICE.

ALEXANDER STANTON, OF LYNN, MASSACHUSETTS.

## ELECTRIC HAIR-BRUSH.

SPECIFICATION forming part of Letters Patent No. 462,599, dated November 3, 1891.

Application filed August 3, 1891. Serial No. 401,488. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER STANTON, a citizen of the United States of America, residing at Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Electric Brushes, of which the following is a specification.

My invention relates to that class of hair-brushes known as "electrical hair-brushes," in which a current of electricity is caused to act upon the scalp through the tufts or knots when the brush is in use.

My invention is an improvement in the details of construction of the electric apparatus and the casing in which it is located and the connection with the tufts or knots. It is illustrated in the accompanying drawings, in which—

Figure 1 shows a central longitudinal and vertical section of the brush. Fig. 2 shows a plan view of the back of the brush with the casing removed.

In the drawings, A represents the brush-stock, which is of the ordinary form of the material, such as wood or equivalent substance. In this are the knots, tufts, or bunches *n*, which are secured as shown in the figures. These are made of any suitable kind of fiber, which must be in whole or in part conductors of electricity. I prefer to use a vegetable fiber made of what is known as the "Columbia grass." With this I mix fine metallic wires, preferably of copper, (shown at *x'*), which form electrical connection between the scalp and conductors, hereinafter explained, when the brush is in use. Upon the back of the stock is secured a casing, preferably of cast-iron. This is divided by a horizontal partition *p*. The upper compartment C is adapted to receive the battery, which is shown therein in position. It consists of two plates, one of copper and the other of zinc, each surrounded by the asbestos packing, which is moistened by sulphuric acid. The casing is provided with a plug E, fitted in an opening through which the acid is introduced. The wires *a f* lead from these plates, respectively, to the primary wire of an induction-coil *d*, located within the lower chamber. The connection through the wire *a* from one plate is through the binding-posts *b c* with

one end of the induction-coil, these posts being properly insulated. The other wire *f* is carried to the other terminal of the induction-coil through a hole in the partition *p*. The wire *a* may be disconnected by loosening the screws of the binding-post whenever it may be desired to interrupt the current. The wires *a* and *f* are insulated. The secondary wire of the induction-coil has its ends *g* and *h* connected to the ends of the spirally-arranged wire *m*. This wire is of copper, and it extends over the inner rows of the tufts and is in contact with the small copper wires *x*, which bind the tufts in the wooden plate or stock of the brush. The wire *m* is divided, one part terminating at *z* and the other at *z'*, the parts alternating with each other. The current, therefore, is interrupted through the wire *m*; but the tufts are in electrical connection with the parts of the said wire *m*, one row with one part and the other row with the other part. The conductivity of the tufts is increased by the fine copper wire mixed therewith, and the circuit of the wire *m* is completed through the scalp between the tufts when the brush is in use.

I claim as my invention—

1. In combination, the brush-stock, the casing having compartments formed by the horizontal partition, the battery in one compartment and the tufts having the connections extending through the other compartment, said casing being connected to the stock, as set forth.

2. In combination, the brush-stock, the casing having a compartment for the battery, said battery consisting of the plates and the moistened packing, and the wires *a* and *f*, connected to the tufts, as described.

3. In combination, the brush-stock, the casing containing the battery in the upper compartment connected with an induction-coil in the lower compartment, and connections to the tufts, and a detachable outside connection to break the circuit, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER STANTON.

Witnesses:

WILLIS M. HUNT,  
WM. O'SHEA.