

L. A. HOFFMAN.
Galvanic-Friction Brush.

Patented June 25, 1861.

No. 32,625.

Fig: 1.

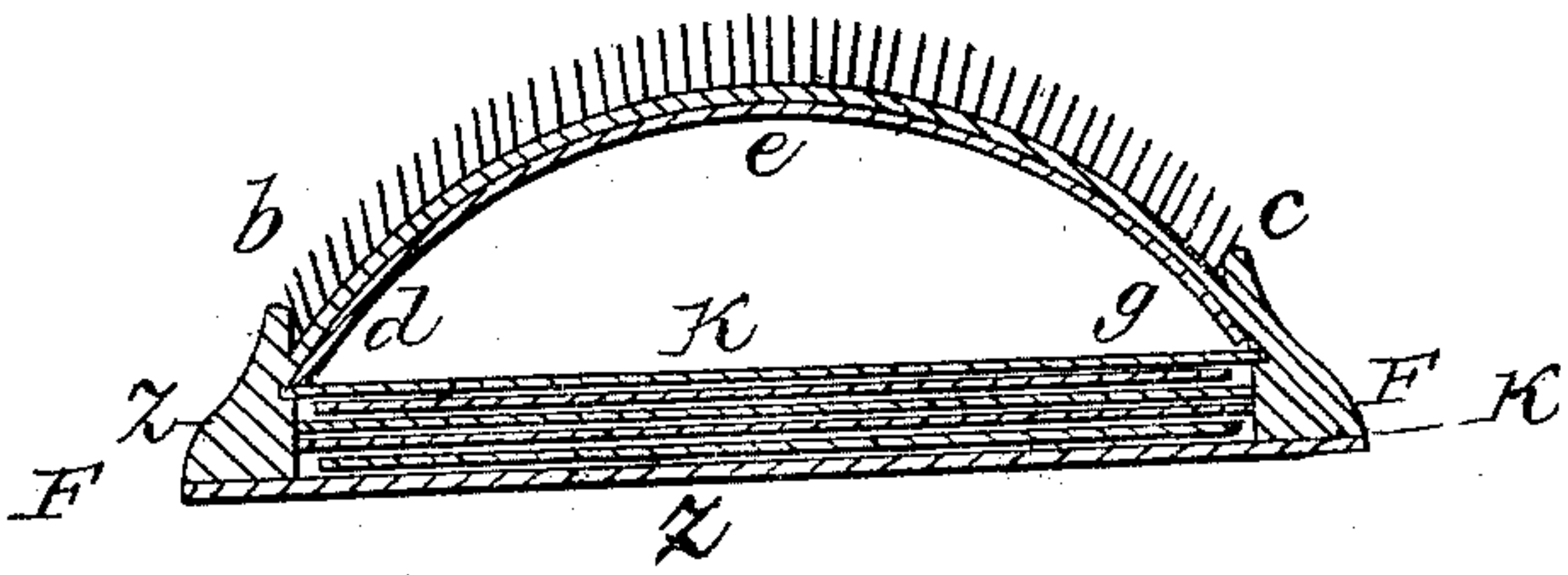
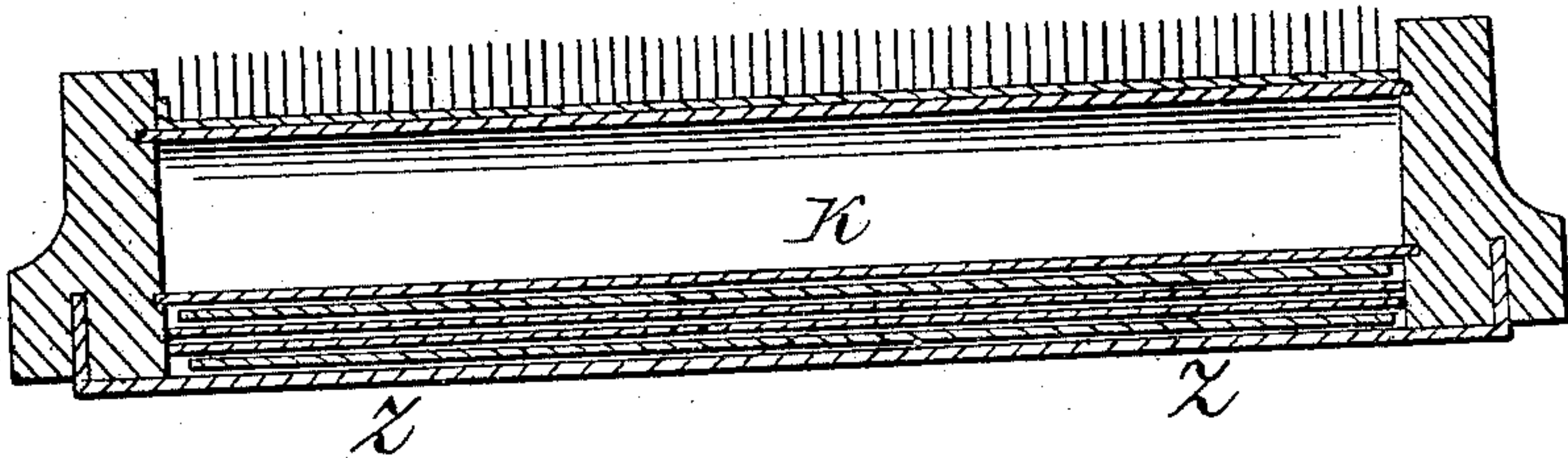


Fig: 2.



Witnesses.

C. L. Hughes,
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L. A. Hoffmann by
[Signature] his atty

UNITED STATES PATENT OFFICE.

LUDWIG AUGUST HOFFMANN, OF BERLIN, PRUSSIA.

GALVANIC METAL FRICTION-BRUSH.

Specification forming part of Letters Patent No. 32,625, dated June 25, 1861.

To all whom it may concern:

Be it known that I, LUDWIG AUGUST HOFFMANN, of Berlin, in the Kingdom of Prussia, have invented an Electro-Galvanic Metal Friction-Brush; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed sheet of drawings, in which—

Figures 1 and 2 represent transverse and longitudinal sections.

My invention consists in an oblong quadrangular wood frame five inches long and two and seven-eighths inches broad, on which a piece of leather curved upward is fixed. On this leather are stuck, in close rows, pins of plated silver wire half an inch long, toward whose heads, at the back of the leather, is placed a polished zinc plate just curved like the same, that bears upon all the heads of the before-mentioned pins. This zinc plate rests with both of its long side walls upon a plain polished copper plate, which is fastened in the above-mentioned wood frame. Against this copper plate a piece of felted cloth is loosely placed, succeeded by a likewise loosely-placed polished zinc plate, to which then is added a loosely-placed polished copper plate, after that a piece of felted cloth, and at last, as a finishing of the friction-brush, a polished zinc plate, at both whose narrow sides there are applied small studs that fit into two grooves made at the corresponding sides of the wood frame. A plane through the friction-brush parallel to its narrow side will show the transverse section in the adjoined figure.

b a c represent the leather in which the pins are stuck; *d e g*, curved zinc plate, which lies against the heads of the pins; *K*, copper plate fastened in the wood frame. On this copper plate rests the before-mentioned curved zinc plate *d e g*. *F* is a piece of felted cloth; *Z*, zinc plate; *k*, copper plate; *f*, piece of felted cloth, which are loosely placed in the wood-frame. *z* is the finishing zinc plate, held by two studs, which are fitted in the grooves in the wood frame.

It will be understood from this that the piece of felted cloth *F*, including all the plates and pieces of felted cloth, is to be taken out of the

frame. Now, if the pieces of felted cloth are dipped into salt-water and, with the plates of metal alluded to, put again into the friction-brush in the before-stated order, the galvanic current thus produced will pass through the curved zinc plate, which, as conductor, rests upon the fastened copper plate which lies against the heads of the pins, into the heads, respectively pins of the friction-brush. If the friction-brush is held so that the hand touches the finishing zinc plate, the body coming by that in contact with the zinc pole, and then with rubbing and brushing at another part of the body, the copper plate being brought in contact with the body, the electro-galvanic chain will be closed by this operation and the current will pass through the body.

Should a person be brushed by another the chain will then be simply formed in the following manner: While the person who is brushing brushes with one hand he touches with the other him that is to be brushed at any part of his body. It is only to be remarked that where the elements of the chain come in contact with each other the conducting must be facilitated by moistening them with salt-water, so that the hand which touches the zinc pole and that part of the body which touches the copper pole are to be made wet with salt-water.

Having now described the nature of my said invention, and in what manner the same can or may be performed, I claim—

As a new article of manufacture, the herein-described electro-galvanic metal friction-brush, the same consisting of a stock containing a series of copper and zinc plates arranged alternately, and having felt or other suitable absorbent interposed, as specified, in combination with the curved leather strap studded with rows of pins of plated silver wire, and the curved zinc plate at the back thereof, the whole being constructed and arranged substantially in the manner and for the purposes set forth.

LUDWIG AUGUST HOFFMANN.

Witnesses:

JULIN IMME,

P. H. F. PRILLWIRT.