

(No Model.)

W. C. HOLMES.
ELECTRIC PEN HOLDER.

No. 409,968.

Patented Aug. 27, 1889.

Fig. 1.

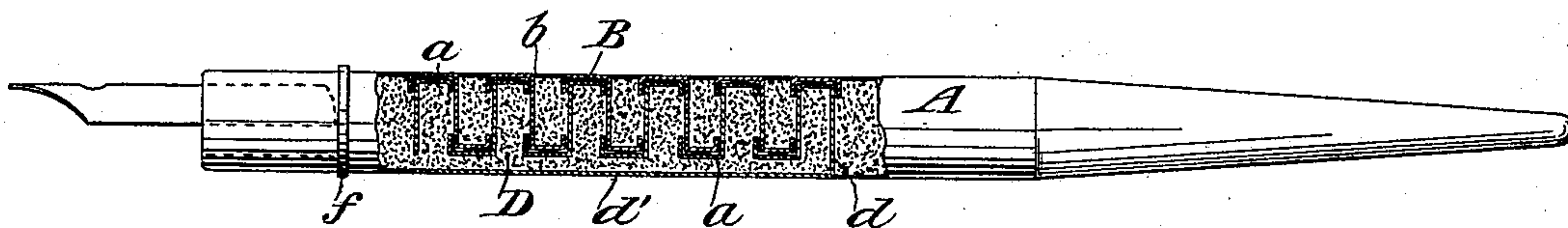


Fig. 2.

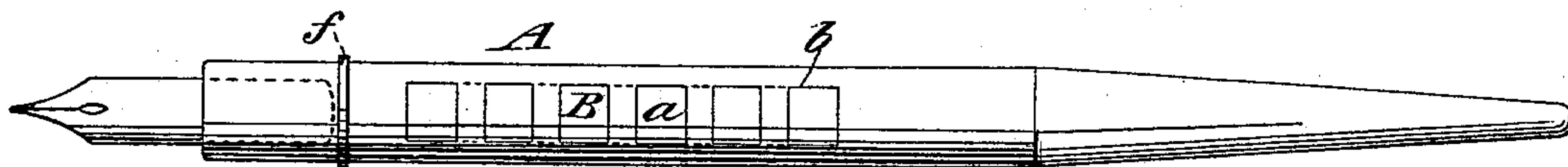
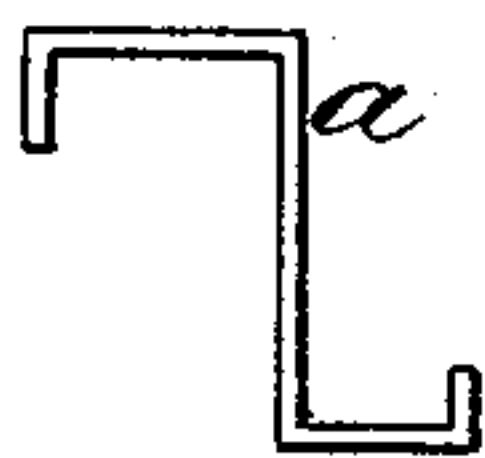


Fig. 3.



Witnesses:

Olundgren

John Riker

Inventor.

William C. Holmes

*By attorneys
Brown & Gussowald.*

UNITED STATES PATENT OFFICE.

WILLIAM C. HOLMES, OF WATERBURY, CONNECTICUT, ASSIGNOR OF ONE-HALF TO CHARLES L. HOLMES, OF SAME PLACE.

ELECTRIC PEN-HOLDER.

SPECIFICATION forming part of Letters Patent No. 409,968, dated August 27, 1889.

Application filed February 11, 1889. Serial No. 299,360. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HOLMES, of Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Electric Pen-Holders, of which the following is a specification.

In carrying out my improvement I place in a pen-holder, at a suitable distance from the pen and in a position where the fingers and thumb will rest when the pen is in use, an electric thermo-pile capable of generating by the warmth of the hand an electric current, which may be useful in preventing diseases common among penmen.

I will describe in detail an electric pen-holder embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side view of a pen-holder, showing my improvement, a portion of the pen-holder being broken away to more clearly disclose the internal construction and the thermo-pile being shown in section. Fig. 2 is a plan or top view of a pen-holder, showing my improvement. Fig. 3 is a detail view, on an enlarged scale, of one of the elements of the thermo-pile.

Similar letters of reference designate corresponding parts in all the figures.

A designates a pen-holder, which may be made of any suitable material—such, for instance, as vulcanized rubber—and which is hollow for at least a portion of its length.

B designates a thermo-pile. This pile is arranged within the hollow portion of the pen. As shown, it is composed of elements *a*, united in pairs, so as to form a sinuous whole extending lengthwise of the pen. One of these elements is shown more clearly in Fig. 3. Each pair of elements is composed of any two metals of the thermo-electric scale—such, for instance, as copper and German silver. The upper side of the pen-holder, at the hollow portion thereof, is provided with openings *b*, into which extend a portion of each of the pairs of elements in such manner that the portions extending through the openings will be flush, or substantially so, with the

outer surface of the pen-holder. One of the elements—namely, the one at the rear of the pile—is provided with a downwardly-extending portion *d*, from which extends at approximate right angles a portion *d'*. The portion *d'* is arranged within a suitable opening in the shell of the pen-holder and extends in the direction of the length thereof. The position of the portion *d'* is such that when the pen-holder is in use the thumb, or it may be one of the fingers, will contact with said portion, while the position of the portions of the pile which extend through the apertures *b* is such that when the pen-holder is in use one or more of the fingers will contact with such portions.

The heat generated by the hand when the pen-holder is in use warms the outer extremities or exposed portions of the pile, and thus induces a current of electricity therein, it being understood that the inner joints of the elements will be cooler than those which are exposed. Circuit is closed on the pile through the fingers or through the fingers and thumb of the hand, the result being that a current will be caused to pass through the fingers or through the fingers and thumb, which current has been found very advantageous in preventing pen-paralysis and other diseases common to penmen.

I have shown insulating material *D* as arranged within the hollow portion of the pen-holder and as surrounding the elements. This insulating material may be of any ordinary or desirable kind.

Upon the pen-holder I have shown a metallic ring *f* of such diameter that it will be maintained by friction upon the holder. By sliding this ring along so that it will make contact between the exposed portions of the thermo-pile a shunt will be effected, which will prevent the electric current from passing through the hand.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pen-holder, the combination, with a hollow shell, of a thermo-pile having certain portions of its elements extending to the exterior of the holder in position to contact

with the hand when the pen is in use, so as to be energized by the heat of the hand, substantially as specified.

2. In a pen-holder, the combination, with a
5 thermo-pile arranged within the pen-holder and having exposed contact-points adapted to contact with the hand when the pen is in

use, of a shunt arranged upon the pen-holder and adapted to shunt the current, substantially as and for the purpose specified.

WILLIAM C. HOLMES.

Witnesses:

GUERNSEY RAINES,
THERON MINOR.