

S. Warrington, Pen.

No. 56,645.

Patented July 24, 1866.

FIG 1



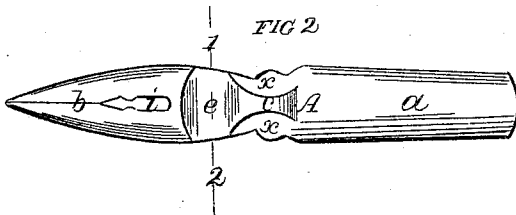
FIG 3



FIG 4



FIG 2



Witnesses { Wm. Albert Hall
J. K. Harkin Godwin

S. Warrington
By his Attorney
H. H. Harkin

UNITED STATES PATENT OFFICE.

SAMUEL WARRINGTON, OF PHILADELPHIA, PENNSYLVANIA.

WRITING-PEN.

Specification forming part of Letters Patent No. **56,645**, dated July 24, 1866.

To all whom it may concern:

Be it known that I, S. WARRINGTON, of Philadelphia, Pennsylvania, have invented an Improvement in Writing-Pens; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a writing-pen constructed, as fully described hereinafter, so that the pen will yield to such a degree on the application of a slight pressure as not to fatigue the writer, without being so flexible at the point as to spread and produce a heavy line when the same is not required.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is an exterior view of a writing-pen made according to my improvement; Fig. 2, a plan view; Fig. 3, a longitudinal section, and Fig. 4 a section on the line 1 2, Fig. 1.

A is a pen, the nib *b* of which is of the form shown in the drawings, while the shank *a* is curved in the ordinary manner. Between the shank and the nib is an S-shaped bend or curve, one portion, *c*, of which rises above the line of the upper surface of the shank, while the other portion, *e*, sinks an equal distance below this line. The portion *c* is perfectly straight on the line 1 2, Fig. 2, as shown in Fig. 4, while at each side of the curve *c* is an inclined flattened flange, *x*, as shown in Figs. 2 and 4. The flat sides or flanges *x x* extend a short distance below the curve *c* to the sides of the curve *e*, and gradually diminish in width toward the front end, as shown in Fig. 1. In the nib *b*, which is split in the ordinary manner, is the usual opening *i*.

Pens of the ordinary construction are generally either too stiff or are elastic only at or near the points, so that on the slightest excess of pressure the nib is spread to such an extent as to produce too heavy a line.

In a pen of the above description the elasticity gradually increases from the shank to the point, there being less in the curved portion *e* than in the nib, and still less in the curved portion *c*, which is almost perfectly rigid in the center, but becomes more flexible as the width of the flanges *x x* diminishes toward the curve *e*.

There is sufficient rigidity in the nib to prevent the latter from spreading to a great extent, except under considerable pressure, so that when the pressure is but slightly increased the pen will bend only at the curved portions *c e*, without spreading the nib to any considerable degree, and without the thickness of the line produced being materially increased. Owing to the form of the curves *c e*, however, the pen will bend at this point only to a limited degree, so that when an excessive pressure is applied the nib may be caused to open to any extent desired.

I have ascertained by repeated trials that while a pen constructed in this manner will yield so readily to pressure as not to fatigue the writer, it is not so flexible at the point as to spread and deliver the ink too freely, and thus produce heavy lines when not required. The writer therefore has that perfect control of the instrument which is so desirable where superior penmanship is required.

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

A pen, A, having curves *c* and *e* and flanges *x x*, when the said curves and flanges are formed and arranged in respect to the nib and shank of the pen as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL WARRINGTON.

Witnesses:

CHARLES E. FOSTER,
W. J. R. DELANY.