E. S. JOHNSON.

PEN.

No. 191,154. Patented May 22, 1877.

Fig. 1.

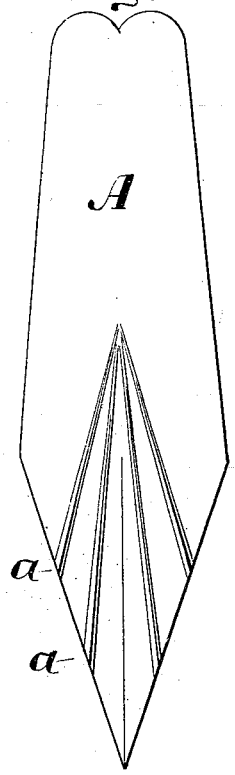

Fig. 2.

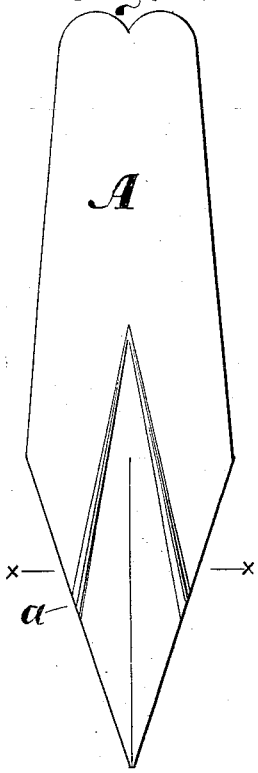

Fig. 3.

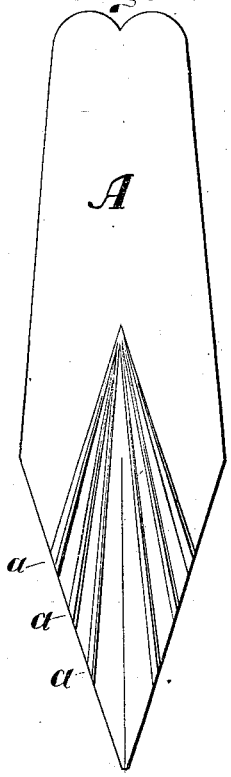

Fig. 4.

WITNESSES:

Aug. C. Gordain

M. Gardner

INVENTOR:

E. S. Johnson

By his atty R. D. O. Smith

UNITED STATES PATENT OFFICE.

EPHRAIM S. JOHNSON, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN PENS.

Specification forming part of Letters Patent No. **191,154**, dated May 22, 1877; application filed April 10, 1877.

To all whom it may concern:

Be it known that I, EPHRAIM S. JOHNSON, of Jersey City, Hudson county, and State of New Jersey, have invented new and useful Improvements in Gold Pens; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to improvements in gold pens, and has for its object the production of a uniform stiffness to each pen belonging to a certain size and grade of stiffness, the stiffness being increased or diminished without increasing or diminishing the thickness or quantity of the metal. By this means several different grades of stiffness may be made out of the same size of pen, all containing the same quantity of metal, so that a person living at a distance from the manufacturer can order understandingly just what he wants. This has always been a great desideratum sought by manufacturers of gold pens.

The nature of my invention consists in making corrugations or indentations, that may be of any design of figure or form, located upon each side of the nib or bifurcated portion of the pen, so as to stiffen the metal.

I have found it more practical and preferable to make one, two, three, more or less, corrugations running or extending from a point in the longitudinal center line of the pen diagonally to the outer edge of the nib between the point and body of the pen. The number and location of these corrugations or ribs determine the degree of stiffness desired to be imparted to it.

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

Figure I represents a gold pen made with two corrugations on each side of the nib. Fig. II represents the same as Fig. I, except it has one corrugation or rib. Fig. III is the same as Figs. I and II, except it has three corrugations or ribs. Fig. IV is a transverse section on line *x x* of Fig. II.

Letters of like name and kind indicate like parts in each of the figures.

A A A, in Figs. I, II, and III, represent gold pens, the bodies of which are made in the ordinary way as to form. *a a* represent corrugations, one on each side of the nib, made with suitable dies. The corrugations, being impressed upon the inside of the pen, form reservoirs or fountains for ink, and cause or side or back of the pen. This formation adds produce ridges or elevations upon the out- materially to the stiffness of the pen, and makes every one struck up in the same dies uniform in stiffness, which cannot be done by any other known means or process. In Fig. I are shown two corrugations on each side of the nib, which gives it a greater degree of stiffness, and in Fig. III are three corrugations or ribs, which gives still more stiffness to the pen.

To each size or number of pens I make three or more grades of stiffness, which I designate by the letters A B C, and so on, C being stiffer or harder than B.

It will be seen that the stiffness of the pen depends on the number of corrugations made in it.

I do not confine myself to any specific form or design of corrugations made in the nib of a pen for graduating its stiffness, as they may be varied without affecting, materially, the object of my invention.

Having thus described my invention, what I claim is—

A gold pen constructed with corrugations in its nib, substantially as shown and described, for the purpose of definitely graduating said pen as to stiffness.

EPHRAIM S. JOHNSON.

Witnesses:

MORRIS RICHTER,

CHARLES ROGERS.