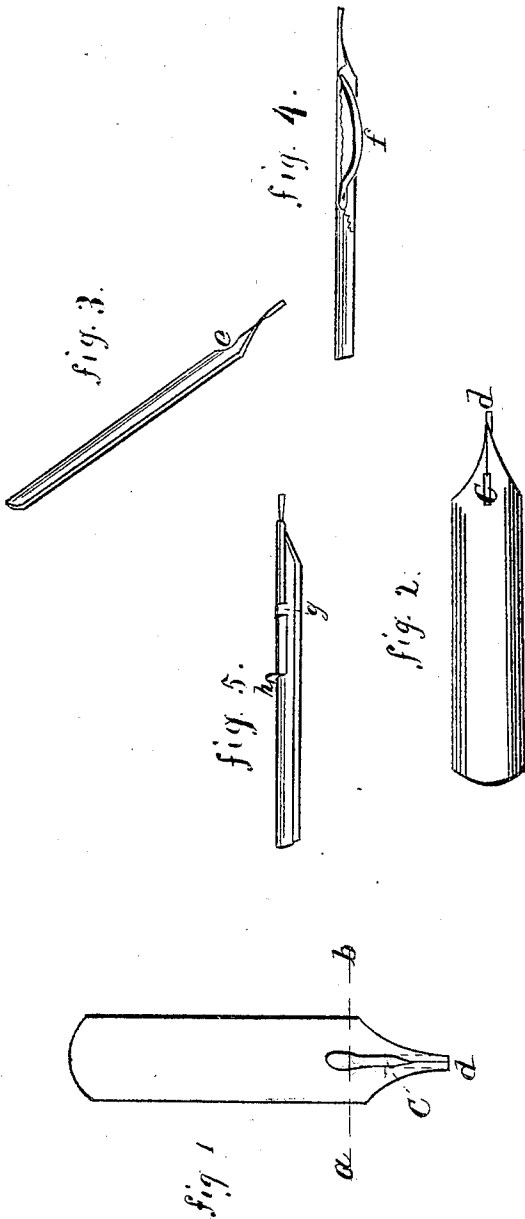


G. Crandell,
Pen.

No. 108,455.

Patented Oct. 18, 1870.



Witnesses:
W. H. Thompson
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GERMOND CRANDELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 108,455, dated October 18, 1870.

IMPROVEMENT IN PENS.

The Schedule referred to in these Letters Patent and making part of the same.

I, GERMOND CRANDELL, of the city and county of Washington, in the District of Columbia, have invented certain Improvements in Writing-Pens, of which the following is a specification.

The first part of my invention relates to the construction of the nib, in such a way as to give increased depth at the extreme point, to prevent catching on making the upward stroke; also, in constructing the two sections of the nib in such a way as closely to resemble the blades of a drawing or ruling-pen, thereby securing a perfectly smooth line in the downward stroke.

The second part of my invention relates to the combination of my pen with a movable slide on the top of the pen, by moving which, toward the point, prevents or regulates the flexibility of the nib, so that it may be used as a drawing-pen, making any desirable width of line.

Figure 1 is a plan view of a pen embodying my invention.

Figure 2 is a top view of the same after being formed.

Figure 3 is a side elevation of the same.

Figure 4 is a side elevation with a section removed, disclosing the loop for holding the ink.

Figure 5 is a side elevation, showing the movable slide *h* for regulating the flexibility.

For the shape of the body of the pen, any of the known forms may be used.

Fig. 1 represents a flat piece of metal as first cut with the dies.

On bending the body of the pen in its proper shape, the open space *c* is closed, the two sections of the nib being first twisted or bent inward in the direction of the dotted lines *c d*, as shown in fig. 2; this brings the two flat surfaces together at the point *d*, and constitutes the split for the flow of the ink.

Should the rounding of the pen fail to close the opening *c*, a little bevel downward, at the point where the dotted line *a b* crosses, will effectually do so.

In the construction of metallic pens, heretofore, for fine writing, it was found indispensable to grind each side down until they nearly came to an edge at the point; then, in order to get the proper flexibility, the metal of which the pen was made must also be very thin, so that the point of the pen when finished was necessarily sharp, almost like a needle.

With such a point it was almost impossible to make the up stroke without one foot of the nib catching and spattering the ink, or the entire point penetrating the paper.

The object of my invention is to overcome this difficulty, and also to secure a perfectly smooth line, on both edges, in the down stroke. This, I believe, I have effectually accomplished.

By cutting each half of the nib broader at the point, at first, and then turning it up edgewise perpendicular to the body of the pen, I secure any desirable depth of point up and down, and consequently can effectually prevent any catching and spattering of ink, and the possibility of penetrating the paper in making the up stroke, at the same time securing the fine hair line desired.

By this arrangement of nib, I also secure a very important feature of the drawing-pen, the two edges corresponding to the blades of that instrument, and, like them, in making the down stroke, each side of the nib makes a slightly indented track or channel, by means of which the ink is guided, and a perfectly smooth line obtained.

When the point is made of the same material as the pen, these edges are formed by turning each section of the nib up edgewise, as stated.

But when extra pieces are added, as in the gold pen, these pieces are to be worked down to an edge on the under part, from the point back, to the same sharpness as at the extreme point, so that, on pressing the pen down for a broader mark, the same thin edges will be kept on the paper, instead of the constantly-increasing width from the point back, as in the present plan.

By means of the slide *h* moving under the loop *g*, or its equivalent, fig. 3, this pen becomes a very good substitute for the drawing-pen.

When moved forward, as shown in the figure, it prevents the spreading of the two parts of the nib, and therefore secures a fine, even, hair mark.

By moving the slide a little back, a slight motion is allowed the nib, the sections opening slightly, and consequently a larger line is obtained.

Any desirable size of line may be secured in that way, by moving the slide back or forward.

Fig. 4 represents the loop or strap *f*, secured to the body of the pen and extending well toward the point on the under side, for the purpose of holding a larger quantity of ink than the pen would otherwise carry.

This may be attached to the pen, as shown in the figure, or fastened to the pen-holder, as desired.

I claim as my invention—

1. Increasing the depth of the nib of ordinary elastic metallic pens, when such increased depth is produced by forming edges on the under parts of the nib, running back from the point toward the heel of the pen, substantially as and for the purposes set forth.

2. The improved pen, as described, in combination with the slide *h*, or its equivalent, substantially as and for the purposes specified.

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Witnesses:

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