

J. F. BETZLER.
COMPOSITE PEN.
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941,403.

Patented Nov. 30, 1909.

Fig. 1

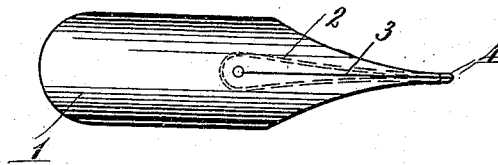


Fig. 2

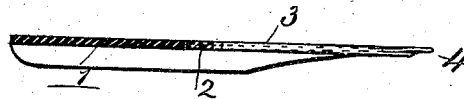


Fig. 3



Fig. 4



Witnesses
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COMPOSITE PEN.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH F. BETZLER, a citizen of the United States, and resident of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Composite Pens, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of the invention are to provide a composite pen having an increased ratio of flexibility and resiliency over an all metal pen, and also possessed of unusual efficiency and capability of retaining these qualities for a long time without change and of retaining its shape permanently.

The pen is designed for use as an individual pen or with a fountain attachment for use with fountain pens.

The pen is composed preferably of vulcanite which is an extremely elastic and flexible substance and the points are composed of platinum, iridium, or other hard metals capable of sustaining a hard durable surface, and the points are integral with or attached to a wire loop or wires which encircle the "slit" in the pen. This loop is embedded in and vulcanized in the pen and hence prevents the points from becoming destroyed and retains the pen in shape and the points in their proper relative positions. The wire loop reinforces and adds to the stability and resistance to pressure in the body of the pen, and combined with the vulcanite body provides the exact degree of elasticity required. The loop is formed of a wire which has its vertical sides deeper than the horizontal edges thus adding to its strength and stiffness.

The invention is illustrated in the accompanying drawings, hereinafter more fully described and the novel features thereof pointed out in the claims.

In the accompanying drawings, Figure 1, is a plan view of the pen, Fig. 2, is a longitudinal section thereof, Fig. 3, is a perspective view of the integral wire loop em-

ployed, and Fig. 4 is a similar view showing the metal wire pointed with some harder and more durable metal.

In these views 1 is the vulcanite pen, 2 is the wire embedded and vulcanized therein, 3 is the central slit about which the wire is secured. The points 4, 4, may project if desired.

The wire is preferably similar in cross section to the one shown in Fig. 2, but the exact shape can be varied to suit special conditions without departing from the spirit of the invention.

It is preferable that the vertical sides of the wire should be the widest, thus adding greatly to the stiffness thereof.

I do not claim a metal pointed pen or nib inserted within a vulcanite body, but

What I claim as new and desire to secure by Letters Patent is:—

1. In combination in a pen, an elastic vulcanized body portion, and a loop of flat metallic wire having a ratio of less elasticity than said body portion, said wire having greater thickness than width in cross sections and lying on its edge, the extremities of said wire being brought together to form the points of said pen, and said loop embedded in and vulcanized in said elastic body portion.

2. In combination in a pen, a vulcanite body portion having a longitudinal slit, and a loop of flat wire embedded in said vulcanite body and vulcanized on edge therein, and encircling said slit, the extremities of said loop brought together at the outer extremity of said slit.

3. In combination in a composite pen, a vulcanite body portion and a flat looped wire vulcanized therein on edge, said wire having a ratio of less elasticity than said body portion, the extremities of said wire being brought together and projecting beyond said body portion and hardened points for the ends of said loops of wire.

4. A pen body composed of a material having a high ratio of elasticity and provided with a longitudinal slit, in combination with a flat metal wire loop having a less

ratio of elasticity and vulcanized into said vulcanized body portion, the said wire encircling said slit on its edge and projecting at its ends which are closely approximated
5 together and adapted to form nib points.

5. In a pen, a slitted body portion of vulcanite and a flat wire member embedded on edge in said body on each side of said slit, said wire members being pointed and ex-

tending beyond the point of said vulcanite 10 body.

In testimony whereof, I hereunto set my hand this 27th day of February, 1909.

JOSEPH F. BETZLER.

In presence of—

HAZEL MCINTIRE,
E. T. HITCHCOCK.