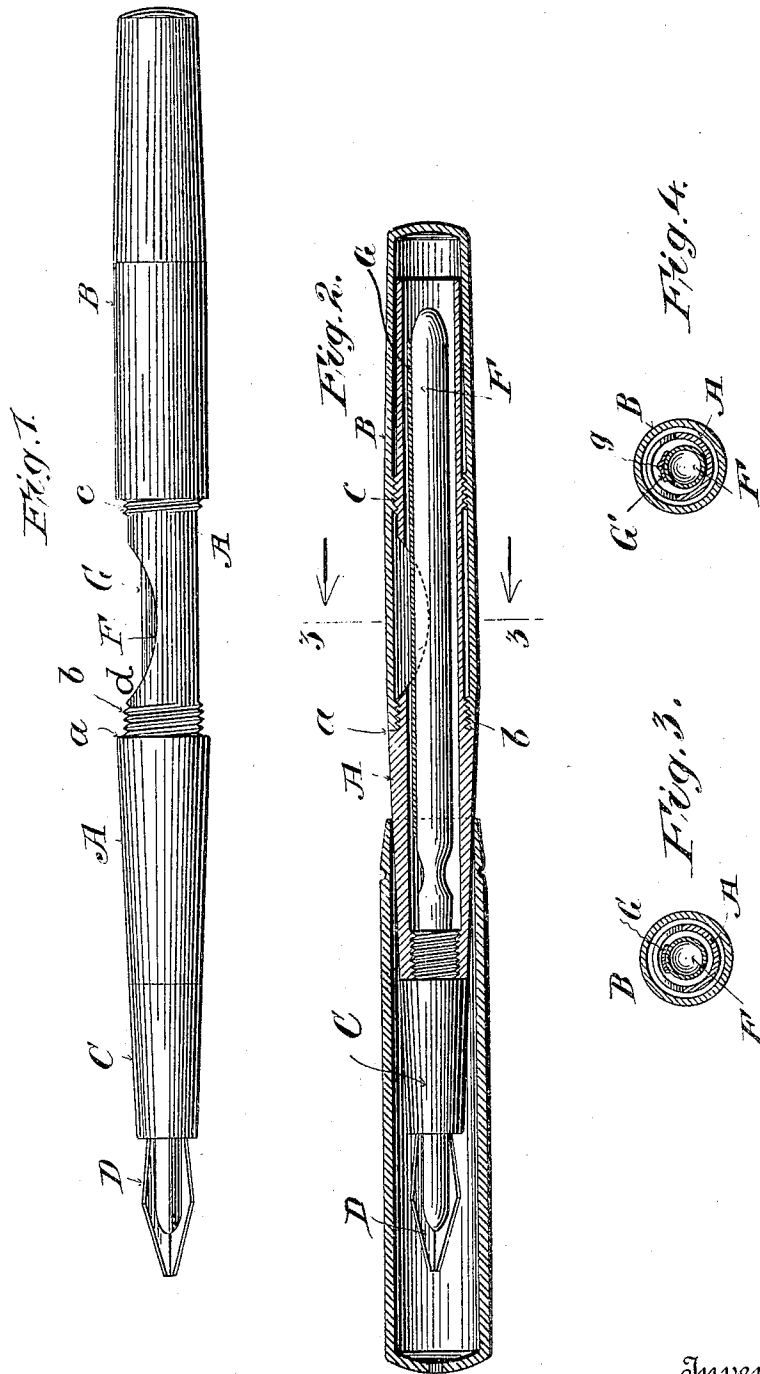


No. 807,500.

PATENTED DEC. 19, 1905.

W. W. SANFORD.
FOUNTAIN PEN.

APPLICATION FILED MAY 9, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

No. 807,500.

Specification of Letters Patent.

Patented Dec. 19, 1905.

Application filed May 9, 1905. Serial No. 260,065.

To all whom it may concern:

Be it known that I, WILLIAM W. SANFORD, a citizen of the United States of America, and a resident of the city of Newark, in the county of Essex, State of New Jersey, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to improvements in fountain-pens of that kind known as "self-filling" pens.

The object of the invention is to provide a cheap, simple, and effective construction without springs or other parts which will corrode or get out of order, and also such that the elastic sack will be guarded and secured against accidental compression and consequent spilling of ink. The details of the invention by which these results are attained are set forth in the description hereinafter following.

Referring to the drawings which accompany the specification to aid the description, Figure 1 is a longitudinal elevation of the pen with the guard opened to uncover the operating-orifice in the barrel. Fig. 2 is a longitudinal section with the barrel closed. Fig. 3 is a cross-section on the line 3 3 of Fig. 2. Fig. 4 is a cross-section of a slight modification.

A is the body part of the barrel, made in one piece of rubber without joint or corrodible metal part or attachment, and B is the guard closed at the outer end, C being a pen-section in the end of the barrel, as is usual, and D the pen. Said barrel A is shouldered and reduced in diameter at *a* and provided with male threads *b* to engage female threads in the guard B. As near as practicable to said threads *b* in order to obviate undesirable air compression in the barrel when the guard is sent home to place is an operating-orifice *d* through said barrel A, and a little to the outer side of said orifice *d* are threads *c* to secure the guard B when it is in open position, Fig. 1.

A resilient rubber sack F, which is secured at its open end to the pen-section C, is provided with a bar G, secured firmly to said sack F in any suitable manner, as by cementing it directly or indirectly on said sack. A single bar G is preferable to two bars, because any increase in the number of bars diminishes the ink capacity of the sack unless the diameter of the barrel is correspondingly increased,

and said bar may be of any non-corrodible material, as hard rubber or non-corrodible metal.

To fill the pen, the guard is unscrewed from threads *b*, moved back to uncover orifice *d*, and secured to threads *c*, whereby it is again firmly united to the body part of the barrel. Then by pressing the finger on the bar G the sack F is collapsed between said bar and the opposite wall of the barrel A, and the pen being inserted in an ink-bottle when the finger is removed from the bar the resiliency of the sack F will expand said sack and draw in ink. The guard B is then sent home to place and the pen is ready for use and secured against accidental compression of the sack.

The rigid compression-bar may be stiffened with a longitudinal rib *g*, as seen in Fig. 4.

With the construction hereinbefore described should the sack F be ruptured the guard B may be screwed tightly home and the pen then be used as an ordinary fountain-pen, for the guard fits ink-tight on the threads *b*. Therefore the inconvenience of pens wherein the barrel is made in a plurality of parts with joints which leak ink if the sack is ruptured, so that the pen cannot be used until another sack is put in it, is avoided. Moreover, as will be apparent from the foregoing description, no springs or operative connections for the bar are used, the resiliency of the sack F alone being relied on to draw in the ink, and therefore the corrosion which occurs in all pens using springs to actuate the bars is avoided.

Having now described my improvements, I claim as my invention—

The combination in a self-filling pen of a barrel in one piece and provided with male threads *b* and *c* and with an operating-orifice, said threads lying at opposite ends of said orifice a guard provided with female threads adapted to engage with one or the other of said male threads in different positions of said guard, a resilient ink-containing sack wholly within said barrel, and a rigid bar secured to said sack in position to be accessible from said orifice, substantially as described.

Signed at New York city this 6th day of May, 1905.

WILLIAM W. SANFORD.

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