(No Model.)

E. COFFIN, Jr.

FOUNTAIN PEN.

No. 263,389. Patented Aug. 29, 1882.

Fig. 1.

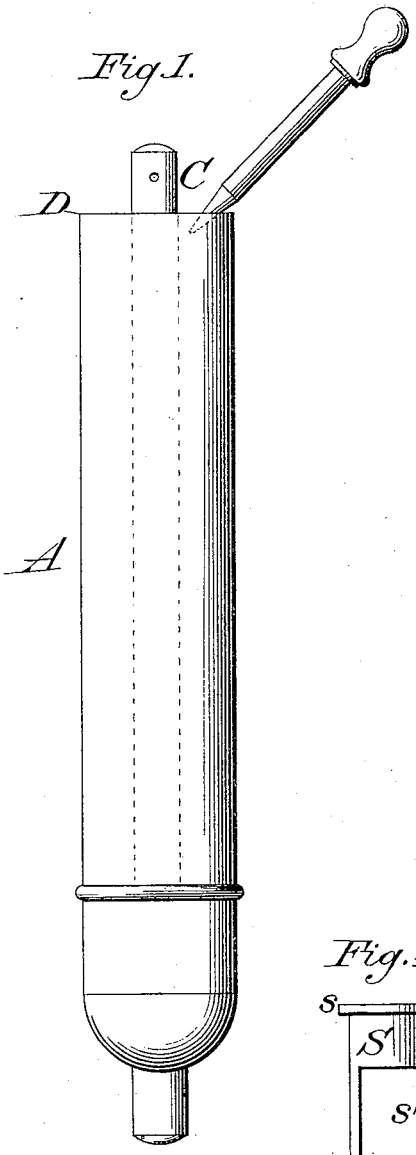


Fig. 2.

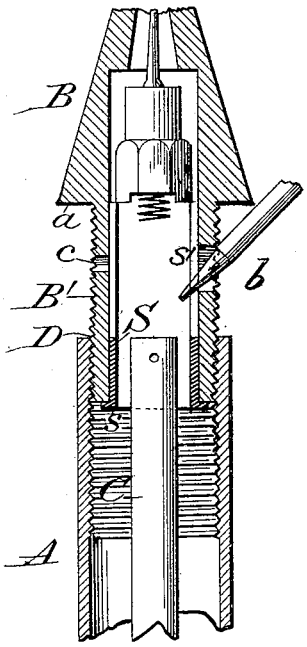


Fig. 3.

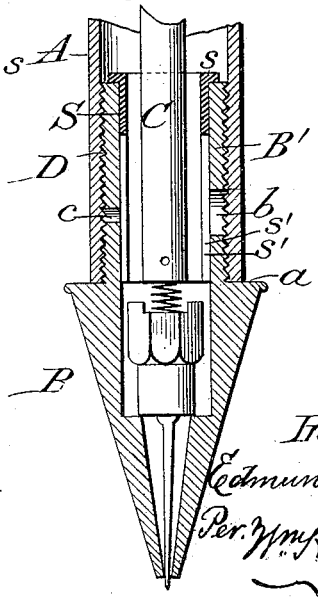
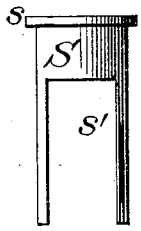


Fig. 4.



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EDMUND COFFIN, JR., OF NEW YORK, N. Y.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 263,389, dated August 29, 1882.

Application filed December 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDMUND COFFIN, Jr., a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Fountain-Pens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to fountain-pens, particularly that class called "stylographic fountain-pens," the body or main portion of which is composed of a long hollow handle or reservoir and a comparatively short tapering writing end or point section united by screw-joint.

My said invention consists, first, in providing an opening through the screw-joint portion of the point-section of said pens for the purpose of charging the pen with writing-fluid without removing the point-section, as heretofore, said opening being of sufficient size and shape to admit the ready and proper insertion of the charging-instrument and in such position in the screw-joint portion that a few (one or more) threads of the screw will remain both above and below the opening; second, in providing or constructing the screw-joint portion of the point-section of fountain-pens with a supplemental or additional opening to that made for the introduction of the charging-instrument, for the purpose of furnishing an escape for the air as the pen is being filled; third, in the employment, in connection with the perforated point-section, of a slotted sleeve to form a stop to prevent the falling down of the valve (when this form of device for controlling the flow of ink from the pen is employed) and obstructing the opening through which the pen is filled, all as and for the purposes hereinafter more fully set forth and claimed.

Heretofore in some classes of fountain-pens composed of a barrel or handle reservoir and tapering writing-point section the filling or charging of the same with writing-fluid has usually been performed by entirely unscrewing the point-section and removing it from the barrel and then pouring or injecting the fluid down into the open mouth of the barrel. Among the many objections to this plan may be mentioned that of the hands and clothing becoming soiled by the accidental escape of ink from the pen on separation of the parts, the entrance of dust to the pen, and, from the fact that the point-section containing the valve mechanism had to be laid away or placed one side while the filling operation was being performed, the valve frequently became displaced within and even lost from the point-section. On unscrewing the parts, also, the valve mechanism becoming displaced within the point-section, upon screwing the parts together again, the needles have been frequently bent, broken, or injured because of not being exactly in proper position. All of these defects or objections are, as will be hereinafter seen, overcome or avoided by my construction and arrangements of the parts. The parts of the pen after being first put together always remaining so, therefore, there being no removal of the parts, the escape of ink is prevented, as also the displacement of the valve mechanism.

Referring to the drawings forming a part of this specification, Figure 1 illustrates the old method of filling this class of pens to which my invention relates. Fig. 2 represents my method and arrangement of the parts when filling; Fig. 3, a diametrical section through the point-section and lower portion of the barrel, the parts of the pen being closed, ready for use; Fig. 4, a detached enlarged view of the slotted stop for the valve.

A is the barrel or ink-reservoir handle, forming the body of the pen; B, the point-section, and C the air-tube, all of the usual or any approved construction.

D represents the joint between the point-section and reservoir.

Through one side of the wall of the screw portion B′ of the point-section, at a point just above the shoulder *a*, is formed an opening, *b*, preferably of oblong shape, as shown, and of sufficient size to easily and readily admit the introduction of the charging-instrument. Opposite to this opening *b*, also in the threaded part B′, is made another small hole, *c*, for the purpose of facilitating the escape of air should the filling-instrument occupy too much of the filling-opening *b*. Should this opening *b* be made sufficiently large, the opening *c*

may be found to be unnecessary; but the arrangement shown is preferred. It is proposed also to make the screw portion B′ of the point-section somewhat longer and to contain a greater number of threads than usual, to give ample room for making the opening for filling, and at the same time leave sufficient length of screw to securely unite the barrel and point-section when the parts are in order for filling, as shown in Fig. 2; but it is not proposed to limit the invention to this feature, for the same end may be accomplished with the parts of the pen as now made.

Any form of valve or mechanism for controlling the flow of ink from the pen may be used in connection with the perforated point-section. If the weighted valve be used, as shown, it is necessary that a stop, S, or provision similar to that shown in Fig. 4, be employed, the office of which is to prevent the displacement of the valve upon separating the sections of the pen and inverting the same for filling, as shown in Fig. 2. This stop S is of cylindrical form, with flanges *s* at the top and slotted or open lower portion, *s′*. When in position this stop fits down within the mouth of the point-section, as shown in Figs. 2 and 3, the flange *s* preventing its too far insertion into the point-section and forming a means for withdrawal of the same when desired to clean or repair the pen. As will be seen, the stop is of sufficient length, so that when in position and the pen is inverted for filling the spring in the top of the valve will not reach the edge of the filling-opening. The obstruction of this filling-opening is thereby prevented. The slot or opening *s′*, being made through both sides of the stop S and coming over the openings *b c* in the screw portion of the point-section, permits ready access to the interior of the pen for filling and the escape of air while filling.

As before remarked, the screw portion of the point-section may be somewhat longer than usual, and only one opening be formed for filling, or two, as found to accomplish the desired result; but in case only one opening be formed it must be of sufficient size to admit the mouth of the filling-instrument, and also to permit the ready escape of air from the pen, which occurs as the ink fills the pen; otherwise bubbling and splattering of ink at this opening will result.

The operation of filling the pen will be apparent by reference to Fig. 2, all that is necessary being to unscrew the point-section sufficiently to permit the insertion in the proper direction of the filling-instrument through the opening in the joint into the interior of the pen. As the ink flows into and occupies the barrel of the pen the air escapes through one or both of the openings where, or opposite to where, the filling is going on. The point-section and barrel being still united by several screw-threads, no escape of ink is permitted, and the loss or displacement of the parts is prevented, the openings in the threaded part being made sufficiently far from the shoulder of the point-section to insure an effectual closing of the pen when the parts are screwed tight together.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The point-section of a fountain-pen, formed with an opening through the screw-threaded or joint portion, of sufficient size to admit the mouth of the charging-instrument for filling the pen without separating the parts, as hereinbefore set forth.

2. The point-section of a fountain-pen, formed in the screw-threaded or joint portion with an opening for filling and an opening for the escape of air, as herein set forth and shown.

3. In a fountain-pen, in combination with the point-section formed with openings in the screw-threaded or joint portion, the cylindrical slotted stop for holding the valve mechanism in place, as herein set forth.

EDMUND COFFIN, JR.

In presence of—
ISIDOR GRAYHEAD,
JOHN CALDWELL COLEMAN.