G. HAUSCHILD.

Fountain-Pen.

No. 161,228. Patented March 23, 1875.

Fig. 1.

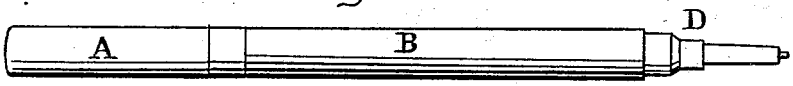


Fig. 2.

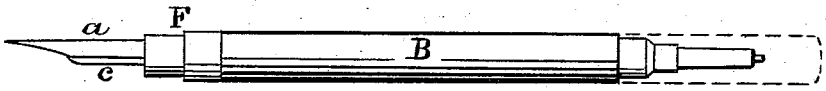


Fig. 3.

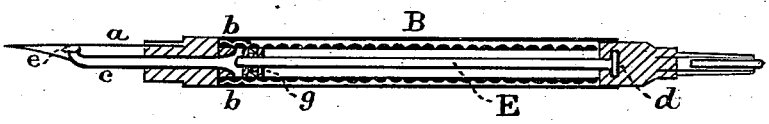


Fig. 4.

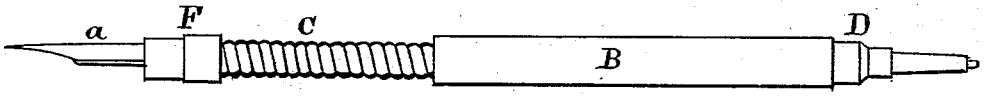


Fig. 5.

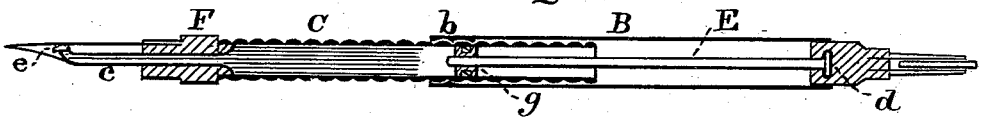
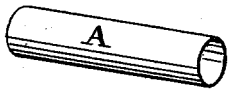


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

GUSTAVE HAUSCHILD, OF TOPEKA, KANSAS.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **161,228**, dated March 23, 1875; application filed February 24, 1875.

To all whom it may concern:

Be it known that I, GUSTAVE HAUSCHILD, of Topeka, in the county of Shawnee and State of Kansas, have invented a new and useful Improvement in Fountain-Pens; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents my invention when used as a pencil. Fig. 2 represents the same when adjusted for use as a pen. Fig. 3 is a longitudinal section of Fig. 2. Fig. 4 represents the holder extended as when the reservoir is filled with ink. Fig. 5 is a longitudinal section of Fig. 4. Fig. 6 represents the end cap detached.

This invention relates to certain improvements in fountain-pens; and it consists in an inner casing, which forms the reservoir for the ink, provided with a feeder or conductor-tube to carry the ink to the pen. It also has a spirally-ribbed outer surface, which engages with a female thread of a second outer casing, and works in the same either up or down. The inner casing is provided with a piston and rod, which latter is connected so that, by turning the outer casing, the piston is advanced in the inner casing, and the ink forces out the conductor-tube.

In the drawing referred to, A designates the cap, which may be placed on the holder to protect the pen when not in use, the said cap being made to fit the holder at either end, according to the use of the utensil either as a pen or pencil. B indicates the outer casing or tube, having the pencil D attached at one end thereof; and the said tube has on its inner side, at or near the other extremity, a thread, (indicated by *b*,) and is ribbed lengthwise on its outside to afford a purchase for turning the same. The inner tube or case C is attached to the pen-holding part F, and has its exterior spirally ribbed, as shown in the drawing, so that, when it is passed into the outer tube B, it operates like a screw, the thread (indicated by *b*) fitting against the spiral ribs. The rod E within the tube or reservoir C is loosely coupled, as shown at *d*, to the piece D, so that the said rod is not necessarily turned by the movement of the tube B when the same is withdrawn. At the other end of the rod E is attached the sucker *g*, fitting within the reservoir, so that, when the rod with tube B is withdrawn in the process of filling the reservoir, the operation is like that of a sucking-pump. A conductor for the ink is designated by *c*. This consists of a small tube set in the piece F, and extending from the reservoir a suitable distance out, and slightly turning upward under the pen *a*, as shown in Figs. 3 and 5, thus forming a channel for the ink from the reservoir to the pen. The pen *a* is placed in a slit in the piece F, and the lead is also held in the pencil in the ordinary manner.

The various parts of the utensil may be constructed of any materials suitably adapted to the several uses of such parts.

When it is desired to use the utensil as a pen, the cap A, covering the pen *a*, is removed, and may be placed on the other end of the holder. The pen *a* is also temporarily removed, and the utensil is held in an upright position by one hand on the piece F, the mouth *e* of the conductor *c* being held in the ink. The other parts connected with tube B are then partially withdrawn by turning with the other hand, tube C acting as a screw, and the sucker *g* operating as a pump. The ink rises through the conductor *c* into the reservoir. A small piece of wool or other spongy substance is then placed in the mouth *e* of the conductor, the wool extending to the pen, the latter having been inserted after filling the reservoir with ink. The holder is then slightly shortened by turning the tube B, thus forcing downward the sucker *g*, and pressing the ink through conductor *c* to the spongy substance at the mouth, by which the ink is conveyed to the pen.

When it is desired to cease using the pen, the tube B is slightly withdrawn by turning the same, this having the effect to draw the ink from the conductor up into the reservoir. The cap A is replaced to cover the pen, and the holder, in this condition, may be carried in the pocket-book without soiling anything.

By means of the above-described arrangement is constructed a pen in which all the elements requisite for ready writing are present, and one in which the ink is so confined

that it can never blot the paper or stain the fingers. In addition to its other advantages, also, it is simple in construction, and enables the user to write much more rapidly by saving the time usually lost in dipping the pen.

Having thus described my invention, what I claim as new is—

The combination, with the inner tube C, having a spirally-ribbed outer surface and a conductor-tube, *c*, of the outer case B, having female thread *b*, and the piston-rod E, attached to the outer case B by a swivel-joint, *d*, and operating substantially in the manner and for the purpose described.

GUSTAVE HAUSCHILD.

Witnesses:

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