(No Model.)

F. JULIUSBERGER.

FOUNTAIN PEN.

No. 331,794. Patented Dec. 8, 1885.

Fig. 2.

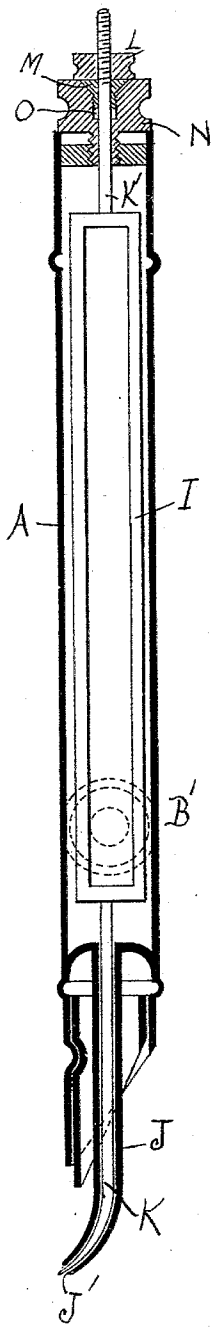


Fig. 6.

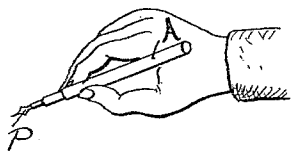


Fig. 1.

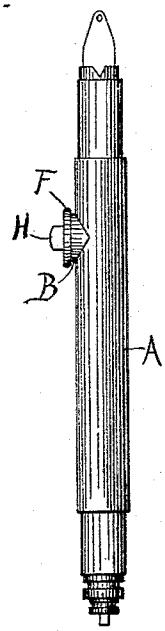
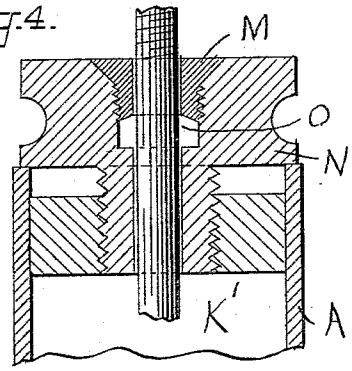


Fig. 4.



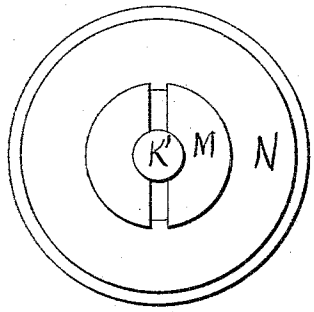


Fig. 5.

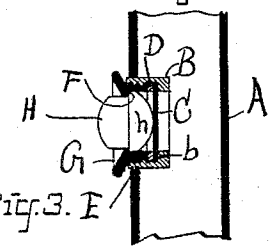


Fig. 3.

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UNITED STATES PATENT OFFICE.

FEDOR JULIUSBERGER, OF BERLIN, GERMANY.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 331,794, dated December 8, 1885.

Application filed June 4, 1885. Serial No. 167,583. (No model.)

To all whom it may concern:

Be it known that I, FEDOR JULIUSBERGER, a subject of the King of Prussia, and a resident of Berlin, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Pen-Holders to be Filled with Ink, of which the following is a specification.

The valuable and patentable features of this my present invention have reference to certain important improvements in the form, combination, and disposition of the several elements embodied in the construction and necessary to the operation of the class of devices named in the title of this invention, but which, in conjunction with my improvements, may be devoted by the party controlling the patent to any purpose now or hereafter proposed.

My invention consists of certain elements organized essentially as described in conformity to the accompanying drawings, adapted to operate as hereinafter explained, including all modifications as to their form, combination, and disposition, applicable to any purpose, mentioned or not mentioned, but especially applicable to the uses alluded to, and different, when considered in entirety, from any device ever before made public, as far as the records prove.

By a general but critical examination of the state of the art as disclosed by periodicals, books, and the more important patents, it is evident that there is plenty of room for improvement in the class of devices forming the subject-matter of this specification. One device is simple, but ineffectual; another is too complicated, and therefore too expensive; another is, from the very nature of its construction, unattractive in appearance and inconvenient of operation, while others are practically worthless. By a diligent and systematic study in the application of the principles of science and of invention, and by trials of successively improved devices, I have succeeded in effecting such important improvements that the device is at once adapted to meet the wants of all concerned in a very effectual and superior manner, which is the object of my invention.

In order to illustrate the practical manner of carrying out my invention, drawings are hereunto annexed and described, in which similar letters of reference represent corresponding elements, and in which each part referred to is designated by a single letter.

Those parts not mentioned I do not claim in this my present application. The materials of construction employed, the exact forms of design, and the proportional dimensions are not alluded to in every instance, as they are best determined upon by those versed in the art.

Figure 1 is a general view of the fountain-pen; Fig. 2, a sectional view of the same; Fig. 3, a sectional view of a portion of the fountain-pen; Fig. 4, an enlarged view of the upper part of Fig. 2; Fig. 5, a top view of Fig. 4, and Fig. 6 a picture of a person's hand holding the fountain-pen.

A short socket-tube, B, is inserted into the tube A, the latter being the handle of the pen-holder, and at the same time the containing-vessel for the ink. The said tube B is secured in said tube A by solder, by screwing, or by any convenient means. The inner end of the socket-tube B forms a flange or seating, *b*, for an elastic diaphragm, C, and a ring, D, and the outer end is threaded internally for a screw-cap, E. The screw E is bored out, and is provided with a projection, F, and a funnel-shaped mouth, G. A button, H, has an enlarged part, *h*, which fits loosely within said projection, as shown, so that it may be pressed by the forefinger against the elastic diaphragm C. The diaphragm prevents the button H from falling into the tube A, and the projection upon itself prevents it from falling out of the socket-tube in the opposite direction from that of the tube A. An opening or orifice is left in the side of the tube A by removing the said parts E, H, *d*, and C, so that ink may be introduced into the tube A.

Referring more particularly to Figs. 2, 4, and 5, a sliding piece, I, is provided in the interior of the tube A, by means of which the opening J′ in the outflow-tube J can be closed. This sliding piece consists of a pin, K, bent to suit the outflow-tube J, fixed to the sliding piece proper, I, which is in the form of a rectangular frame and embraces the socket-tube B. (Shown in dotted lines at B′.) The upper part of the frame I terminates in another pin, K′, threaded as shown. A stuffing-box is provided around this pin K, and consists of the

following elements: the gland-screw M, having a central hole bored therein for the passage of the pin K′, and being screwed into a recess formed in N, the recess being tapped with a corresponding thread. A conical depression is formed at the lower end of the screw M, which presses upon the washer O, contained in N, and there forms a tight joint, which prevents escape of the ink between K′ and its seating without impeding the motion of the needle K.

The operation is somewhat similar to that in other pens of the same class. The pressure of the finger upon the button H causes the ink to flow from the orifice J′ to the pen P, the needle K serving as a stopper when the pen is not in use by means of the nut L, located upon the threaded piece K′.

Having now stated the object of the said invention, having described its practical realization by reference to the accompanying drawings, having particularly ascertained the manner in which the same operates to accomplish the said object, and having intimated that it is appiicable to other purposes than those mentioned, what I consider to be novel and original, and therefore claim as my invention, secured to me by the hereinbefore in part recited Letters Patent of the United States, is—

1. In a fountain-pen, a regulating attachment consisting of the combination of the socket-tube B, inserted into the tube A and provided with an inwardly-projecting flange, *b*, upon one end and with a female screw upon the other end, the screw-cap E, screwed into the said female screw, the diaphragm C, resting upon the said flanges *b*, the ring D, located between the said diaphragm C and said socket-tube B, and a push-button, H, provided with an enlarged portion, *h*, which is located between said diaphragm and projection F, said projection F being located upon the interior of the socket-tube B, substantially as and for the purpose specified.

2. In a fountain-pen, the combination of the tube A, for containing ink, the socket-tube B, inserted into said tube A, a frame I, embracing the said socket-tube and located within said tube A, a needle, K, upon one end of said frame, and orifice J′, in which fits said needle K, a threaded piece, K′, secured to the other end of said frame I, and upon said threaded piece a packing-box consisting of the gland-screw M, provided with a central hole, through which passes the said threaded piece, a stopper, N, provided with a cavity containing the washer O, and said female screw, in which screws said gland-screw M, substantially as described.

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Witnesses:
ALEX. SCHOLZE,
B. ROI.