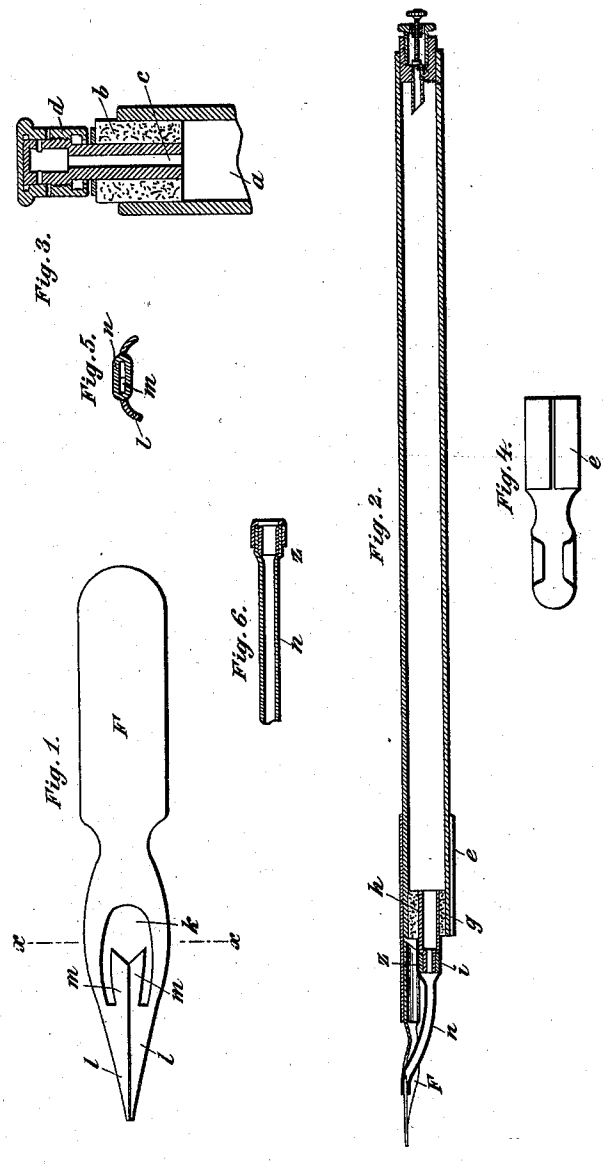
(No Model.)

I. GOLWER.

FOUNTAIN PEN.

No. 535,283. Patented Mar. 5, 1895.



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UNITED STATES PATENT OFFICE.

IWAN GOLWER, OF RIGA, RUSSIA.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 535,283, dated March 5, 1895.

Application filed October 2, 1894. Serial No. 524,750. (No model.)

To all whom it may concern:

Be it known that I, IWAN GOLWER, photographer, of 67 Mühlenstrasse, Riga, in the Russian Empire, have invented a new and useful Pen-Filling Penholder with Pen, of which the following is a specification, reference being had therein to the accompanying drawings.

A great defect in connection with fountain pens as hitherto constructed is, that the quantity of ink delivered remains always constant, whether thin or thick lines are being produced. Moreover the consumption of ink is not sufficiently economical in such fountain pens, and the result is that very often blots are made through the point of the pen not being able to use up all the ink delivered to it.

The before mentioned defects have been obviated in the fountain pen constructed according to the present invention, besides which it has the advantage of a simplified construction which enables it to be manufactured at an exceedingly low cost price.

The principle of the invention consists in attaching an elastic tube to the nib of the pen in such a manner as to cause the ink supply to be regulated thereby, according to the opening of the split between the two parts of the nib caused by the pressure of the writer on the point of the pen when writing.

It is obvious that the pen and the tube may be modified without altering the principle of the invention, and the accompanying drawings show one method in which the invention may be carried into practice.

Figure 1 shows an enlarged view of the pen separately. Fig. 2 is a longitudinal section through the pen and its holder. Fig. 3 is an enlarged sectional view through the top end of the holder and showing a modified form of cap for closing the reservoir. Fig. 4 is a pen-carrying socket. Fig. 5 is a section on the line *x x* of Fig. 1, and Fig. 6 is a detail drawn to a larger scale than Fig. 2.

The fountain pen consists of a hollow stem or holder and of the pen proper. The stem or holder consists of a reservoir tube *a*, which is closed at its upper end by a centrally perforated stopper *b* with a small tube *c* passed therethrough. This tube *c* is closed at its outer end by means of an easily regulated device which allows of preventing the passage of the air therethrough.

The device adopted in Fig. 2 consists of a micrometer screw, the point of which enters the tube *c*, while Fig. 3 shows a screw cap.

The lower end of the reservoir tube is provided with a pen-carrying socket *e* (see Figs. 2 and 4), which receives and holds the pen proper F. The reservoir tube *a* is closed at its lower end by means of a cork *g* perforated through the center so as to receive the tube *h* whose outer extremity is of smaller diameter to form a short neck or nipple *i*. The pen F has a space or opening at *k*, into which pass the rearward extensions or projections *m* of the parts *l* of the nib. The extensions *m* are connected to the neck *i* of the tube *h* by an elastic tube *n*. For the purpose of rendering the connection between the tubes *n* and *h* easy and more secure, a ring *z* fitting around the neck *i* is first introduced a short distance into the end of the elastic tube *n* and the short projecting end of the latter turned back, as shown at Fig. 6, when the tube *n* can be more easily placed over the neck *i* and then be pushed over the tube *h*.

When the reservoir tube *a* is supplied with ink, its tendency will be to run out through the tube *n*, but it is prevented from so doing by the elastic tube *n* closing tightly around the rearward extensions *m* of the nib, as shown in Fig. 5. By, however, exerting a pressure upon the points of the pen, as when writing with it, the slit in the points *l* opens out and thereby displaces the extensions *m*, which in turn open the elastic tube *n* and allow the ink to flow. It is obvious that by this arrangement the ink is only allowed to flow when writing, while at the same time the flow of the ink is regulated automatically by the amount of pressure exerted on the nib of the pen and the consequent opening of the slit between the two parts of said nib, so that when writing only just the exact quantity of ink required for the production of thin or thick lines is allowed to flow down. The very simple connection between the rearward extensions *m* of the parts *l* of the pen-nib and the elastic tube *n* allows of replacing or exchanging a pen with the greatest expedition and without any difficulty whatever.

As the reservoir only consists of a tube, it is an easy matter, compared with other constructions of fountain pen, to clean it, and moreover the arrangement of the screw cap *d*, Fig. 3, or a micrometer screw, Fig. 2, forms a means for preventing the ink from flowing toward the nib when the pen is not in use, while at the same time the exclusion of air from the ink prevents the latter from deteriorating.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A fountain pen having a reservoir, a tube extending therefrom, and a pen-point situated without said tube and having the parts of its nib attached to the tube whereby the wall of the latter is moved to open or close its delivery orifice by the movement of the pen nib, substantially as set forth.

2. A fountain pen having a reservoir, an elastic tube extending therefrom, and a pen-point situated without said tube and having the rear portions of the parts of its nib attached to said elastic tube to regulate the opening of the latter, substantially as set forth.

3. A fountain pen consisting of a reservoir, a tube connected therewith, and a pen having projections connected respectively with the parts of the nib of the pen and also connected with the said tube, whereby the separation of the parts of the nib causes an opening for the delivery of ink in the tube, substantially as set forth.

4. A fountain pen consisting of a reservoir, a tube connected therewith and a pen having rearwardly extending projections connected respectively with the parts of the nib of the pen and also connected with the said tube, whereby the spreading of the parts of the nib causes an opening in the tube for the delivery of the ink, substantially as set forth.

5. A fountain pen consisting of a reservoir, an elastic tube leading therefrom, and a pen having projections connected respectively with the parts of its nib and entering said tube, substantially as set forth.

6. A fountain pen-point having the parts of its nib formed at a distance from their points with projections adapted to be attached to or to enter a delivery tube, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

IWAN GOLWER.

Witnesses:
PAUL FISCHER,
KARL FRANZE.