Oct. 23, 1928. 1,689,142

H. KÖHLER

FOUNTAIN PEN

Filed May 6, 1927

Fig. 1.

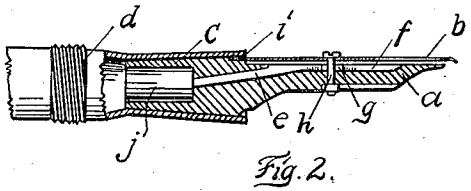


Fig. 2.

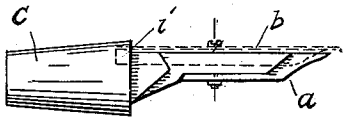


Fig. 3.

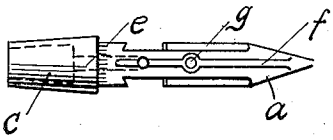


Fig. 4.

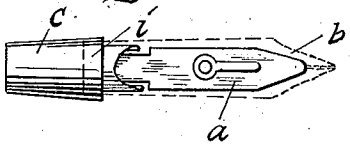
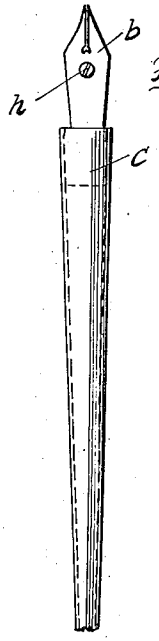


Fig. 5.



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Patented Oct. 23, 1928. 1,689,142

UNITED STATES PATENT OFFICE.

HEINRICH KÖHLER, OF HAMBURG, GERMANY.

FOUNTAIN PEN.

Application filed May 6, 1927, Serial No. 189,353, and in Germany October 21, 1926.

This invention relates to an improvement in fountain pens and particularly to an ink feeding element adapted to be conveniently removed from the pen barrel and to a pen which is removably connected to such feed in order that the pen may be adjustable relative to the feed to control the writing effect and the ink supply.

The main object of the present invention is the provision of an ink feed for fountain pens which may be readily and removably connected to a pen barrel in a non-leaking manner, which ink feed is designed to receive a pen point removably connected to the feed in a manner to permit its adjustment at will to control its elasticity and thereby the writing effect and also to control or regulate the supply of ink passing through the feed to the writing point.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a longitudinal sectional view, partly in elevation, showing the improved feed removably secured in the barrel and the pen point connected thereto.

Figure 2 is a side elevation of the ink feed.

Figure 3 is a top plan view of the same.

Figure 4 is a bottom plan view of the same.

Figure 5 is a view showing the invention in connection with a pen barrel in the form of an ordinary writing pen.

The ink feed of the present invention comprises a member *a* which in its forward portion is substantially similar to the usual ink feed for fountain pens, differing from the latter, however, in that it is formed at its rear end with an extension *c* of conical form by which it may be snugly fitted in a non-leaking manner in the conical end of a pen barrel *d*. The conical interfitting of the barrel and an appropriate portion of the ink feed insures that such feed may be readily applied to the barrel and as readily removed therefrom for insertion in another barrel or for the substitution of another ink feed.

The conical terminal *c* of the ink feed is formed with a chamber *j* open at its inner end to the interior of the barrel and communicating at its outer end with a comparatively small channel *e* which leads upwardly to the surface of the feed in advance of the conical terminal. The upper surface of the feed is formed with a longitudinal channel *f* which extends substantially throughout the length of the portion of the feed in advance of the conical end and terminates adjacent the usual reduced end of the feed located adjacent the writing point of the pen. The channel *e* communicates with this channel *f* in order that ink from the barrel may be supplied to the pen, and such channel *f* is provided, at an appropriate point in advance of the junction of the channel *e* therewith, with a circular enlargement surrounding an opening *g* extending through the feed from top to bottom.

The pen point, otherwise of usual form and construction, has its rear end removably seated in a recess *i* formed in the forward end of the conical section *c* of the feed, the pen point overlying the channel *f* and being removably secured to the feed through the medium of a bolt *h* passing through the opening *g* in the feed, with the head of the bolt overlying the pen point and a nut removably engaging the bolt on the lower side of the feed, the latter being appropriately recessed to accommodate the nut.

From the above description it is apparent that the feed is readily and conveniently connected to an appropriately formed barrel and as readily removed therefrom when necessary to facilitate correction, cleaning or repair. It is equally obvious that while preferring the conical interfit between the barrel and the feed, other removable connections may be readily employed, such, for example, as a screw-threaded connection or the like. Through obvious tightening of the bolt *h*, the resiliency of the writing end of the pen point may be readily regulated, thus varying the resiliency of the writing point to accommodate such to the individual method of writing. Furthermore, the adjustment of the pen point through the medium of the bolt will obviously control the ink supply, as such may vary the flow of the ink along the channel *f* to the writing point. It is thus possible to vary the resiliency according to the pressure on the writing material, whereby more ink may be automatically supplied by a firm pressure on the writing point, that is increased elasticity of stroke, and less ink supplied on decreased pressure on such point.

The construction described readily adapts the ink feed and pen for use with a holder of the ordinary elongated taper form, which holder, as illustrated in Figure 5, may if desired be made hollow to receive a supply of ink.

What I claim to be new is:

1. A fountain pen having an ink feed

formed with a conical terminal to engage the pen barrel, an ink feeding channel in the ink feed, a pen removably carried by the ink feed, and means for adjustably tensioning the pen to control the flow of ink through the channel.

2. An ink feed for fountain pens having an ink channel extending longitudinally thereof, a pen point removably connected thereto and overlying said channel, and a bolt passing through the pen point and ink feed channel, and a nut threaded on said bolt below the ink feed to permit adjustment of the point relative to the feed.

In testimony whereof I affix my signature.

HEINRICH KÖHLER.