

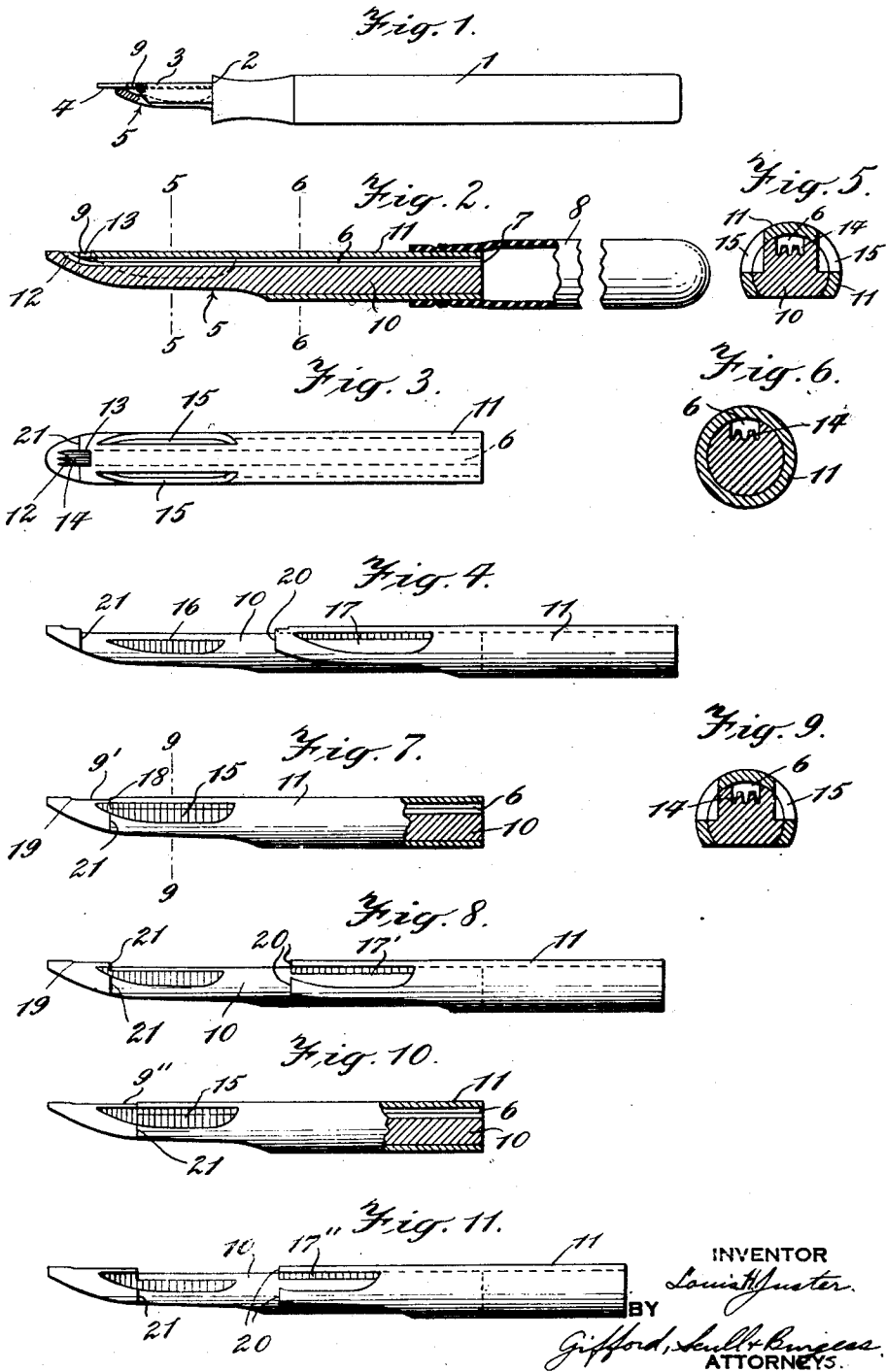
Oct. 11, 1932.

L. H. JUSTER

1,882,644

FEED FOR FOUNTAIN PENS

Filed Aug. 16, 1930



INVENTOR

Louis H. Juster

BY

Gifford, Hull & Burgess
ATTORNEYS.

UNITED STATES PATENT OFFICE

LOUIS H. JUSTER, OF ST. LAMBERT, QUEBEC, CANADA, ASSIGNOR TO L. E. WATERMAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

FEED FOR FOUNTAIN PENS

Application filed August 16, 1930. Serial No. 475,696.

This invention relates to a novel and improved form of fountain pen, and more particularly, to a novel feed therefor. The invention will be best understood from the following description and the annexed drawing, in which I have shown a selected embodiment of the invention, and in which:

Fig. 1 is a view of a fountain pen having the invention embodied therein;

Fig. 2 is a view on an enlarged scale, showing a longitudinal section through the feed used in the pen of Fig. 1;

Fig. 3 is a view of the feed shown in Fig. 2, this view being taken from the top of Fig. 2;

Fig. 4 is a vertical elevation of the feed appearing in Figs. 2 and 3 with the members constituting the feed partially disconnected;

Fig. 5 is a section on the line 5—5 of Fig. 2;

Fig. 6 is a section on the line 6—6 of Fig. 2;

Fig. 7 is a view partly in elevation and partly in section showing a different embodiment of the invention;

Fig. 8 is a view similar to Fig. 4, showing the embodiment appearing in Fig. 7;

Fig. 9 is a section on the line 9—9 of Fig. 7;

Fig. 10 is a view corresponding to Fig. 7 but showing still another embodiment of the invention; and

Fig. 11 is a view corresponding to Fig. 8 but showing the embodiment appearing in Fig. 10.

In prior art practice, the fountain pen feed is usually formed by a single piece of material having a channel formed by a groove in its upper face, this groove being closed by the pen proper. The upper end of the feed communicates with a sack or ink reservoir in which the ink is stored and from which the ink flows down the channel in the feed to a place beneath the pen proper.

When the pen is to be filled the lower end of the barrel must be immersed in the ink in the bottle before proper vacuum can be obtained to draw ink from the bottle through the channel into the sack.

According to my invention, I provide a channel having an inlet communicating with the sack much as before and having an outlet beneath the pen proper but adjacent the point of the pen and spaced from the end of

the barrel whereby, when it is necessary to fill the pen, all that is necessary is to immerse this outlet, which then becomes an inlet for drawing ink through the channel to the sack.

Referring first to Figs. 1 to 6, inclusive, I have shown a pen of any suitable form having a barrel 1, the lower end of which is designated 2. Inserted in the barrel is the usual pen proper 3 having a point 4. Beneath the pen is disposed the feed 5, which is provided with a channel 6 communicating at its upper end or inlet 7 with a sack or ink reservoir 8 and having at its lower end an outlet 9.

The channel 6 may be formed in any suitable manner but for the purposes of illustration, I have shown it in the form of a groove in a member 10 which is slidably mounted in a tubular member 11 to which the sack 8 is secured. While the sack is shown as secured to the feed, it is, of course, understood that it may be secured to a part of the barrel as is also sometimes done in this art. The upper part of the tubular member 11 forms a cover for the channel 6, as plainly seen in Figs. 2 and 5, this top part terminating at the outlet 9. The outlet is formed partly by the upturned end 12 of the groove 6 and partly by the cut opening 13 at the end of the member 11. This outlet is covered by the pen 3, which extends thereover and which is also disposed over the adjacent part of the cover and within the lower end of the barrel. The channel 6 may have its bottom provided with grooves 14 in a manner well known in the art. In the form shown, overflow pockets 15 are provided, these pockets being formed partly by recesses 16 in the member 10 and partly by holes 17 in the member 11, the walls of the holes 17 matching with the walls of the recesses 16 to form continuous pockets. While the invention is shown as used with these overflow pockets and while it is particularly advantageous with such pockets, the invention, of course, is not limited to a construction in which such pockets are used.

In operation, the ink will flow down the channel 6 from the sack and will be discharged at the outlet 9 beneath the penpoint

4. The overflow pockets, if used, will accommodate superfluous ink in the usual manner. When it is necessary to fill the pen, all that is necessary is to immerse the outlet 9 in the ink, this outlet now becoming an inlet through which ink is drawn into the channel 6 and thus into the sack. Any suitable mechanism, such as commonly used with self-filling pens of this type, may be employed for causing the ink to be thus drawn into the channel 6 and into the sack.

It will be seen that it is entirely unnecessary to immerse the end 2 of the barrel. The pen may also be filled from a low supply of ink, which cannot be done with prior art constructions. By the word "barrel" I refer to the part or parts forming the outer surface of the pen usually engaged by the hand and fingers of the user, and extending down to the pen proper. Sometimes the lower end of the barrel is formed as a separate part secured to the upper part, and I intend the term "barrel" as used in the claims to embrace both of these parts when they are used.

Also, by this arrangement, it is unnecessary to have such a close fit between the pen proper and the feed, as it is where the pen is relied upon to form the top or cover of the channel in the feed. Other advantages in this construction are the facts that when the pen is in use the ink will run directly to the pen point and there will be less leakage of ink.

Referring now to Figs. 7, 8 and 9, I have shown therein a similar arrangement in which a larger outlet 9' is provided by making the end 18 of the member 11 terminate a greater distance from the end 19 of the groove 6 in the member 10. In this form the holes 17' in the member 11 become open ended slots and the edge 20 of the part 11, which will thus be formed in several parts, abuts against the shoulder 21 of the member 10. This is closely similar to what takes place in the form shown in Figs. 1 to 6, inclusive, wherein the end 20 abuts a single shoulder 21.

In order to get a still larger opening 9'', the forms shown in Figs. 10 and 11 may be employed, in this form the pockets 15 being formed of larger portions or recesses and being smaller portions of the holes 17''. In other particulars, the parts shown in Figs. 7 to 11, inclusive, correspond closely to the parts shown in Figs. 1 to 6, inclusive, and will not be further described.

I claim:

1. A self-filling fountain pen feed comprising a member having a longitudinally extending channel, a cover disposed over said channel for substantially its entire length but leaving the lower end thereof uncovered, means slidably supporting the cover on the member, a shoulder on the member engaging the edge of the cover to limit its movement and thus determine the size of the uncovered

part of the channel, a pen disposed over said uncovered part of the channel, a sack communicating with the other end of the channel, and means forming a plurality of longitudinally extending ducts in said channel extending from said sack to said lower end of the channel.

2. A self-filling fountain pen structure comprising a barrel having a feed projecting from its lower end, said feed comprising a member having a longitudinally extending channel, a cover tightly closing said channel, said cover extending downwardly below the lower end of the barrel but leaving uncovered a part of the channel, the upper edge of said uncovered part being spaced from said lower end of the barrel, a pen disposed over said uncovered part of the channel and over said cover, a sack communicating with the upper end of the channel, and means forming a plurality of longitudinally extending ducts in said channel extending from said sack to said lower end of the channel.

3. A self-filling fountain pen structure comprising a barrel having a feed projecting from its lower end, said feed comprising a member having a channel, a cover tightly closing said channel, said cover extending downwardly below the lower end of the barrel but leaving uncovered a part of the channel, the upper edge of said uncovered part being spaced from said lower end of the barrel, a pen disposed over said uncovered part of the channel and between the cover and the barrel, a sack communicating with the upper end of the channel, means forming a plurality of longitudinally extending ducts in said channel extending from said sack to said lower end of the channel, and overflow pockets formed in part of the recesses in said member and in part of holes in said cover.

LOUIS H. JUSTER.