Nov. 26, 1940. L. H. ASHMORE 2,222,599

PENHOLDER

Filed May 2, 1938

Fig.10.

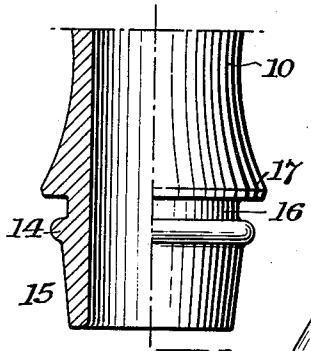


Fig.8.

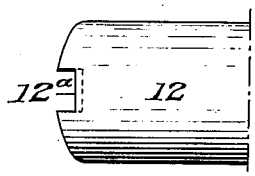


Fig.9.

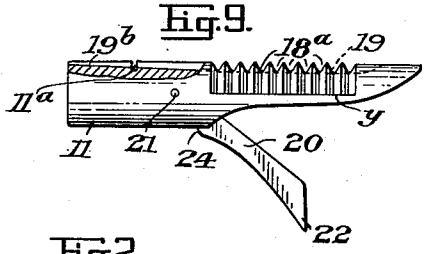


Fig.1.

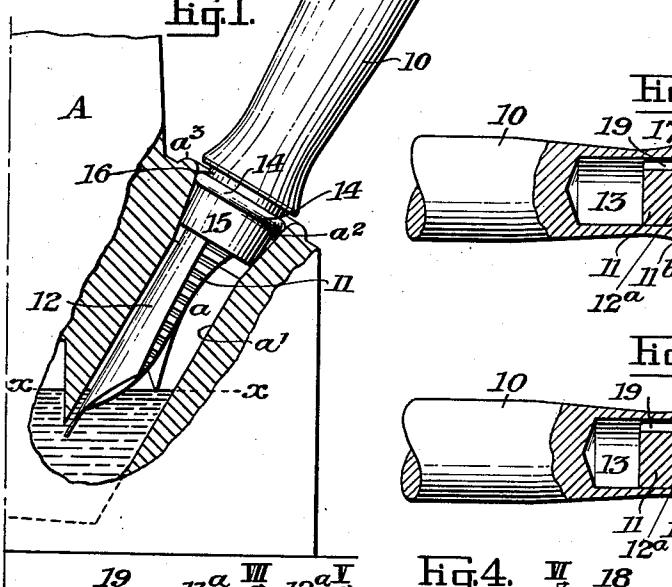


Fig.2.

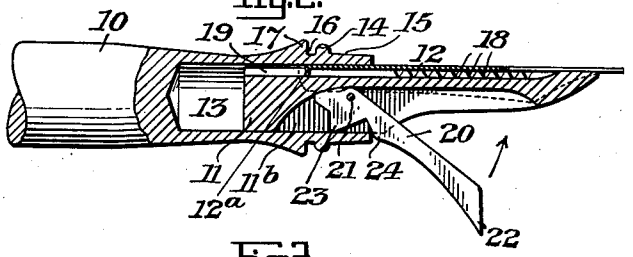


Fig.3.

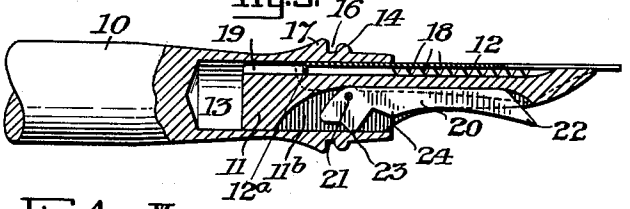


Fig.4.

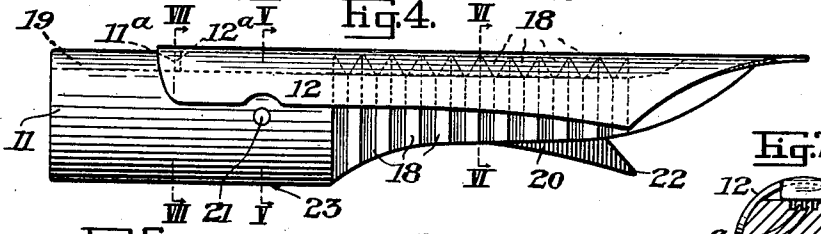


Fig.5.

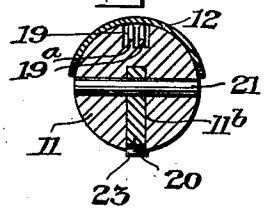


Fig.6.

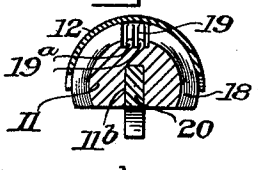
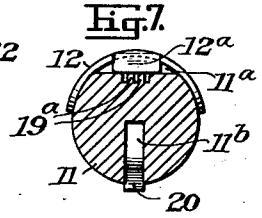


Fig.7.



INVENTOR:
Leon Hehl Ashmore.

by Murray E. Boyer

Atty.

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PENHOLDER

Leon Hehl Ashmore, Collingswood, N. J.

Application May 2, 1938, Serial No. 205,603

15 Claims. (Cl. 120—101)

My invention relates to writing pens with which feed bars are associated, and holders for such assembly, of the type designed to permit the user to write for a considerable length of time after a single dipping in a body of ink; such penholder assembly being left in dipping position in the ink when not in use.

My invention comprises an improved form of structure in which a feed member or bar constructed to serve as a reservoir for ink cooperates with the pen and receives ink when supported by the penholder in dipping position; such feed member or bar subsequently dispensing ink to the pen when the penholder assembly is employed in writing position, and the pen and feed bar being provided with complementary engaging parts which serve to keep these elements in properly associated position when inserted in the penholder and retained therein by cooperative means carried by the feed bar.

One object of my invention is to provide a feed bar of efficient reservoir type that will maintain a supply of ink adjacent to the pen or pen point associated therewith.

A further object of my invention is to provide the feed bar with means cooperating with the pen or pen point for positioning the latter thereon to insure that its longitudinal axis will coincide with the longitudinal axis of the feed bar for the desired contact with ink picked up and retained by the feed bar upon dipping pen and feed bar into an ink receptacle, and at the same time maintaining the lateral position of the pen or pen point with respect to the feed bar, to insure proper dispensing of ink when the pen or pen point is in writing position.

A further object of my invention is to provide locking means carried by the feed bar for holding the same and the pen point in assembled condition within the socket of the penholder and to construct and arrange the locking means in such manner that it may be operated to effect proper and complete insertion of the assembled pen or pen point and feed bar into the socket of the penholder as well as effect partial removal of the assembled pen and feed bar from the socket of the penholder, when a fresh pen or pen point and feed bar is to be inserted.

And a still further object of my invention is to so shape the end of the penholder externally of the same at the feed bar and pen-receiving end as to provide for minimal surface engagement with the throat of the pen-receiving socket of the ink well.

These and other features of my invention are more fully described hereinafter; reference being had to the accompanying drawing, more or less diagrammatic in character in which:

Figure 1 is a view in elevation, partly in section, showing my improved pen and penholder disposed in dipping position in the well or pen-receiving socket of an ink stand; such view also illustrating the manner in which the end of the penholder contacts with the throat of the dipping well and closes or seals the same.

Fig. 2 is a sectional elevation of the socketed end of the penholder and the feed bar and pen unit associated therewith, in the position the parts assume just before the feed bar and pen unit are finally entered into the holder.

Fig. 3 is a similar view showing the feed bar and pen in final position within the penholder.

Fig. 4 is a side elevation, on a much larger scale, of the feed bar and the pen associated therewith, detached from the penholder.

Figs. 5, 6 and 7 are cross sectional views on the lines V—V, VI—VI, and VII—VII, Fig. 4, respectively.

Fig. 8 is a fragmentary view illustrating a portion of a pen point.

Fig. 9 is a view of a modified form of feed-bar, partly in section, and

Fig. 10 is an enlarged view, partly in section, of the end of the penholder receiving the pen or pen point and feed bar assembly.

My improved structure is of the type designed to be left in the dipping well of an inkstand so that at all times the pen, through its associated feed bar, will be well supplied with ink that will be held by the feed bar for gradual consumption during a writing operation. In Fig. 1, I have shown the penholder structure forming the subject of my invention in position in the dipping well of an inkstand; the latter being indicated at A, and the dipping well, arranged at a convenient angle, being indicated at *a*. The bore of the dipping well may be as indicated, that is to say, it may have a portion *a'* with straight walls which is in communication at the bottom with the ink in the inkstand, and a tapered throat portion a^2, in which the penholder is mounted; the relation of the latter to the ink supply being such that the pen or point and its associated feed bar will dip in the ink at all times. The upper end of the throat a^2 may terminate in a rounded edge a^3, and the taper of the throat cooperates with the end of the penholder, as hereinafter described, and provides the desired seat for the same. The level

of ink may be approximately as indicated by the line x—x.

My improved pen and feed bar and penholder assembly is designed and intended to remain in the dipping well of an inkstand, ready for use at all times; the pen and feed bar remaining in the ink and the feed bar retaining, by capillary attraction, the desired supply of ink that will enable the user to do considerable writing from the supply of ink retained by the feed bar, which is especially constructed for this purpose, from a single dipping.

In carrying out my present invention I have provided a penholder **10**, with a specially shaped end which is socketed to receive what may be termed a unit writing and reservoir assembly comprising a feed bar **11**, and a pen or pen point **12**, associated with said feed bar.

The end of the penholder is socketed at **13** to receive the pen or pen point and feed bar assembly, and such socket may have straight walls throughout its extent, or be slightly tapered. Externally of its socketed end, the penholder is provided with an annular rib **14**, whose outer edge may be rounded, and the external wall of the holder between said rib and its extreme end is slightly tapered as indicated at **15**; the relation of the taper with respect to the annular rib **14** being such that the holder when fitted with a feed bar and the associated pen or pen point, will seat in the dipping well of the ink stand in the manner indicated in Fig. 1, where, it will be noted, the rib **14** is shown as engaging the tapered wall a^2 of the throat of the socket or well near or adjacent to the open end of the same, while the extreme end of the tapered portion **15** of the penholder engages such wall a^2 a short distance inwardly of the open end of the same; thus providing for minimal contact of the end of the penholder with the throat of the dipping well.

Beyond the annular rib **14**, the outer wall of the penholder is annularly recessed, as indicated at **16**; such recess lying between said annular rib **14** and a shoulder **17** at the end of the penholder body which lies outside the dipping well, as clearly indicated in Fig. 1; the parts being so dimensioned and arranged that should ink tend to rise on the wall of the dipping well and its throat and pass onto the tapered surface **15**, it will be halted by the annular rib **14**. Should there be any excess sufficient to pass the annular rib **14**, it will be trapped by the annular recess **16** which, lying in the air outside the dipping well, will permit drying thereon below the shoulder **17** and prevent any soiling of the fingers of the user.

The socket **13** of the penholder receives an ink dispensing assembly for writing purposes comprising the feed-bar **11** and the pen or pen point **12**, in what may be termed a unit assembly. The feed-bar may be substantially circular in cross section as indicated in the sectional view, Fig. 5, and such feed-bar is, superficially, of the general character of feed-bars employed with fountain pens. Its surface may be slightly recessed to form a seat for the pen or pen point, although this is usually not necessary. In order that the pen or point may be held against longitudinal movement with respect to the feed bar and may be positioned in exact alignment with the same, the feed-bar is provided with a cross notch **11a** near the rear end of the same and the pen has a portion of the end of the shank, centrally thereof, bent down, as indicated at **12a** to fit this cross notch. The base of the notch is horizontally disposed and the bent down portion of the pen shank lies against the bottom of such notch and in addition to maintaining the pen in the desired longitudinal position with respect to the feed bar, serves to locate the pen or pen point laterally thereon and insure that the writing end of the pen or pen point is in the proper position with respect to the end of the feed bar to properly dispense ink supplied thereby during the writing operation.

At the forward end of the feed-bar and in such position as to underlie the greater part of the pen or pen point, I provide a series of semi-annular recesses **18**, which may be formed by V-notching the feed-bar, and these recesses serve to retain a supply of ink to be gradually fed to the pen or pen point during writing periods. On the upper side of the feed-bar a longitudinal recess or groove **19** is provided; the same being in axial alignment with the pen or pen point, and said longitudinal recess is in communication with the recesses provided by the V-notches so as to provide for passage and proper feed of ink to the pen point from the supply retained by such notches. This groove **19** may be provided with a plurality of longitudinal ribs **19a** on its surface to aid capillarity during any ink movement, whether while remaining in the inkwell, or when writing. The depth of the notches of the feed bar and their number insures a large supply of ink from a single dipping.

In order to seat the unit assembly of feed bar and the associated pen point in the socket of the pen holder and to lock it in place and in addition to provide means for assisting its removal, the feed bar is provided with a lever **20**, mounted in a slot thereof and retained by a pivot pin **21**, which may pass through the feed bar and hold the parts in properly related position. The lever has a forward pointed end **22**, diagonally disposed with reference to and beneath the feed bar to make it readily accessible for operation by the thumb-nail of the user or by a suitable instrument, and its rear end is provided with a heel portion **23**, which may be relatively sharp so that it may partially bite into the wall of the penholder socket when the lever is moved toward the feed bar in the direction of the arrow, as indicated in Fig. 2, such movement of the lever serving to move the feed bar and pen or pen point assembly into finally seated position in the socket of the penholder, as indicated in Fig. 3.

The lever occupies a longitudinal slot **11b** formed in the under side of the feed bar, and the heel portion **23** is so related to the pivot point that when the lever is extended as indicated in Fig. 2, such heel will be out of surface contact with the socket; permitting insertion of the feed bar and the associated pen or pen point into the socket **13** of the penholder and up to contact with the shoulder **24** of the lever, as indicated in Fig. 2. As the feed bar and its associated pen or pen point are to be further pushed into the socket of the penholder, the lever is moved toward the penholder, and contact of the heel portion **23** of the lever with the wall of the penholder socket will cause the lever to move the feed bar and the pen or pen point associated therewith into the socket and into the position illustrated in Fig. 3, wherein it will be noted that the heel **23** has been forced into biting engagement with the wall of the socket; such engagement, with the lever in final position in the slot

of the feed bar, holding the feed bar and the pen or pen point associated therewith against accidental removal.

When it is desired to renew a pen point, the end of the lever may be caught by the thumb nail or by a suitable implement and brought to the position indicated by Fig. 3. In such operation, the heel **23** acts as a fulcrum and as the lever is gradually moved away from the feed bar to the position shown in Fig. 3, the feed bar with the pen or pen point is partially withdrawn from the penholder and into position permitting its ready removal, a feature of great importance should the presence of dried or encrusted ink tend to hold the feed and the pen or pen point within the penholder socket.

In the form of feed bar illustrated in Figs. 2, 3, et seq., the semi-annular grooves **18** at the front end of the same are continuous over that portion of the feed bar surface, as indicated in Figs. 4 and 6, and the longitudinal groove or grooves **19** on the upper surface of the feed bar may extend from a point near the front end of the same beneath the nibs of the pen to the rear end of the feed bar, forming air and ink channels. In the modified form of feed bar shown in Fig. 9, the semi-annular grooves **18**[a] may stop on a line *y*, parallel with or substantially so with respect to the longitudinal axis of the feed bar. In this arrangement, the longitudinal grooves or channels **19** may start from the same point at the forward end of the feed bar as in the structure illustrated in Figs. 2, 3, et seq., and these channel cuts or longitudinal grooves may extend back as far as the last notch or semi-annular groove **18**. From this point, the channel may be constructed in a slightly different manner; it may be as wide as the combined widths of the air and ink channels or grooves of the type of feed bar shown in Figs. 2, 3, et seq., but it is shallower, and may gradually reduce in depth from the last notch or semi-annular groove **18** of the feed bar to the end of the same, as indicated at **19**[b]. The purpose of the ink channels or grooves disposed longitudinally of the feed bar is to hold back and regulate the flow of ink when the pen is in use, and the rear end portion of the channel is designed to break up any possible hindrance to a full capillary action when the pen is in dipping position in the ink.

While I have described and illustrated a specific embodiment of my invention, it will be understood that modifications may be made therein without departing from the underlying principles thereof; all of which are believed to be within the scope of the appended claims.

I claim:

1. In a penholder assembly, the combination of a socketed holder, a feed bar, a pen assembled with said feed bar and together fitting the socket of the holder, a lever carried by said feed bar; the latter being slotted for its reception, and a projection on said lever for engagement with the wall of the socket to seat and unseat the feed bar and pen assembly when inserted in the penholder socket upon movement of the lever toward and from the feed bar.

2. In a penholder assembly, the combination of a socketed holder, a feed bar, a pen for assembly with said feed bar and together insertible in said socket, and a lever carried by the feed bar and movable toward and away from the same; said lever having a projection engaging the wall of the socket to provide a retaining fulcrum whereby movement of said lever toward the feed bar will tend to push the feed bar and pen assembly into the socket for final positioning and movement away from the feed bar will tend to move the feed bar and pen assembly in the opposite direction when it is desired to remove the feed bar and pen assembly from the socket.

3. In a penholder assembly, the combination of a socketed holder, a feed-bar, a pen for assembly with said feed bar for joint insertion in said socket; said feed bar having a slot, and a lever pivotally mounted in said slot and movable toward and from the feed bar; said lever having a projection for engagement with the wall of the socket when the feed bar and pen assembly are in proper position within the socket.

4. The combination with a penholder having a socketed end, of a feed-bar, a pen assembled with said feed bar and jointly fitting into said socket; said feed bar having a slot, and a lever pivotally connected to said feed-bar and mounted in said slot; said lever having a heel portion disposed in such position as to be out of the way when the feed bar and pen assembly is inserted in the penholder socket and to engage the wall of the penholder socket and retain the feed-bar and pen assembly in position when said lever is moved into the slot provided for its reception.

5. The combination with a penholder having a socketed end, of a reservoir feed-bar, a pen assembled with said feed-bar and jointly fitting said socket; said feed-bar being slotted, and a lever pivotally connected to said feed-bar and disposed within said slot; said lever having a heel portion arranged to engage the wall of the penholder socket and retain the feed-bar and pen assembly in position when moved into the slot of the feed-bar and said lever being substantially concealed in said slot when the feed-bar and pen are in proper position within the penholder socket, and said lever having a forwardly projecting end to facilitate movement of the same in the operation of releasing the feed-bar and pen assembly from the penholder.

6. The combination, in a penholder structure of the reservoir type, of a shaft having a socketed end, a feed-bar adapted for insertion therein, a pen associated with said feed-bar, means for positioning the pen with respect to the feed-bar, the latter having an annularly notched section receiving ink with a longitudinal distributing channel intermediate said notches, and a locking lever pivotally mounted in a slot in the feed-bar; the latter being longitudinally recessed for the reception of the lever and the latter having a portion adapted to engage the inner wall of the penholder socket to hold the feed-bar and pen therein.

7. The combination, in a penholder structure of the reservoir type, of a shaft having a socketed end, a feed-bar adapted for insertion therein, a pen associated with said feed-bar, means for positioning the pen comprising a depending lip formed by indenting the end portion of its shank and arranged to fit a cross-notch in the feed-bar, a plurality of semi-annular ridges carried by the feed bar with intervening grooves for the reception of ink, a distributing channel longitudinally of the feed bar intermediate said ridges, and wedging means pivotally mounted in the feed bar for retaining the latter and the pen in proper association within the socket of the penholder.

8. The combination, in a penholder structure of the reservoir type, of a shaft or holder having a socketed end, a feed bar for insertion

therein, a pen associated with said feed bar; the latter having positioning means cooperating with a portion of the feed bar, a plurality of semi-annular ridges forming a grooved section of the feed bar for the reception of ink, a distributing channel intermediate said ridges; the greater part of said channel and all of the grooved section underlying the pen, and a locking lever pivotally mounted in the feed bar; the latter being longitudinally recessed for the reception of the lever and said lever having a heel portion adapted to engage the inner wall of the penholder socket to hold the feed bar and pen assembly therein.

9. The combination with a penholder having a socketed end, of a reservoir feed bar and pen assembly fitting said socket, and a lever pivotally connected to said feed bar and having a portion engaging the wall of the penholder socket to retain the feed bar and pen assembly therein; said feed bar being slotted for the reception of the lever and the latter being substantially concealed in said slot when the feed bar and pen are positioned within the penholder.

10. The combination in a penholder structure, of a shaft having a socketed end, a feed bar for insertion therein, a pen or pen point associated with said feed bar, means for positioning the pen with respect to the feed bar; the latter having an annularly grooved section for the reception of ink and a longitudinal distributing channel intermediate said grooves; said channel being shallower at its rear end, and a locking lever pivotally mounted in the feed bar for retaining the feed bar and pen within the socket of the penholder.

11. A penholder assembly comprising a socketed shaft or holder, a feed bar, a pen or pen point associated with said feed bar and together insertible in said socket, and a lever carried by the feed bar and having a portion for engagement with the wall of the penholder socket whereby movement may be imparted to the feed bar with respect to the penholder socket by moving the lever toward and away from the feed bar.

12. A penholder assembly comprising a socketed penholder, a reservoir feed bar, a pen associated with said feed bar and together removably mounted with respect to the penholder socket, means for maintaining pen and feed bar in proper relative position, and a lever pivotally connected to the feed bar for effecting movement of the same and the pen with respect to the socket of the penholder.

13. A penholder assembly comprising a socketed penholder, a reservoir feed bar having circumferentially arranged grooves at the forward portion of the same and a longitudinal groove extending substantially the full length of the feed bar and communicating with said circumferentially arranged grooves, a pen or pen point associated with said feed bar, and means carried by the feed bar and fulcruming against the wall of the penholder socket for moving said feed bar with respect to the penholder socket when entering and removing the feed bar and the associated pen or pen point.

14. A penholder assembly comprising a socketed penholder, a reservoir feed bar having ink-retaining grooves, a pen or pen point associated with said feed bar and overlying said ink-retaining grooves; said feed bar having a transverse groove in its upper surface, a depending lip carried by the pen and formed by indenting the end portion of its shank for engagement with said transverse groove whereby said parts may be maintained in properly associated relation, and means pivotally mounted in the feed bar and fulcruming against the wall of the penholder socket for entering and removing the feed bar and the pen or pen point from said socket.

15. A penholder assembly comprising a socketed penholder, a feed bar of reservoir type, a pen or pen point associated with said feed bar for joint insertion in said socket, and a lever pivotally mounted in said feed bar and movable toward and from the same; said lever having a projection for engagement with the wall of the socket for effecting movement of the feed bar and the associated pen or pen point when the lever is moved.

LEON HEHL ASHMORE.