

M. T. FISH.
 FOUNTAIN PEN FILLER.
 APPLICATION FILED MAR. 12, 1909.

947,468.

Patented Jan. 25, 1910.

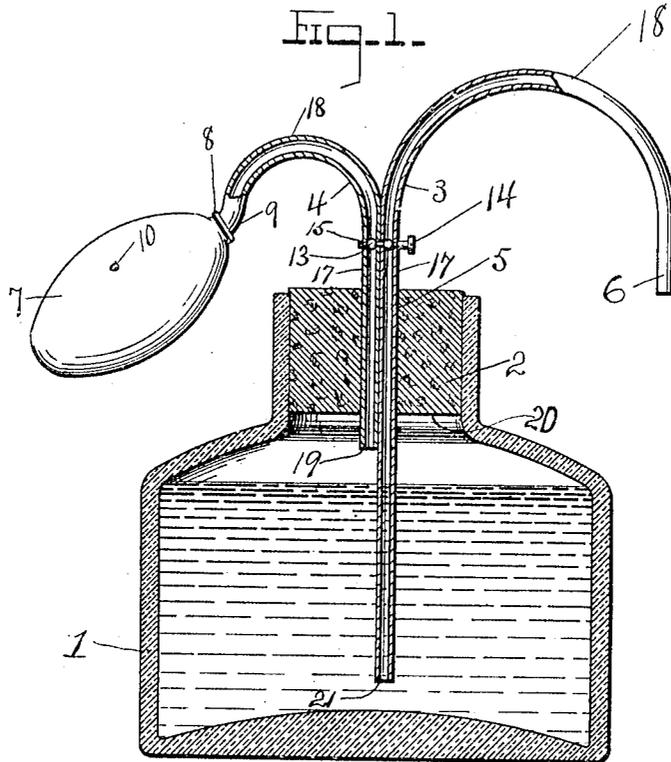
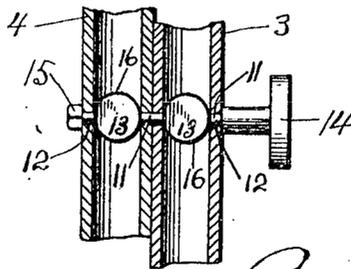


Fig. 2.



Witnesses

C. K. Reichenbach
M. E. Leary

Inventor

M. T. Fish

By

T. S. Bryant

Attorney

UNITED STATES PATENT OFFICE.

MYRON T. FISH, OF ITHACA, NEW YORK.

FOUNTAIN-PEN FILLER.

947,468.

Specification of Letters Patent. Patented Jan. 25, 1910.

Application filed March 12, 1909. Serial No. 483,038.

To all whom it may concern:

Be it known that I, MYRON T. FISH, a citizen of the United States, residing at Ithaca, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Fountain-Pen Fillers, of which the following is a specification.

This invention relates to improvements in fountain pen fillers and more especially to such devices used in connection with an ordinary ink bottle.

An object of my invention is to provide an inexpensive device for filling the ink reservoirs of fountain pens, said device being positioned upon an ordinary cork closure used in an ink bottle.

Another object of my device is to provide such a filler in connection with an ink bottle that is at all times ready for use in filling the pen but employs a means by which the complete closure of the bottle may be effected when desirable in such cases for instance, as the packing of the filled ink bottle in a traveling case.

With these objects in view and others which will appear as the nature of the invention is better understood, the invention consists substantially in the combination and arrangement of parts as fully hereinafter described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the accompanying drawings, forming a part of this application, and in which like numerals of reference designate similar parts throughout the several views, Figure 1 is a vertical section of an ink bottle incorporating my improvement, and, Fig. 2 is an enlarged detail view of the valve member thereof.

Referring more specifically to the drawings, 1 designates an ordinary ink bottle or receptacle having any desirable form of closure as the cork 2.

The invention consists of a longer tube 3 and a smaller or shorter tube 4 having straightened portions 17 for part of their lengths and said tubes secured together in parallel relation throughout such straight portion of the shorter member. The remaining portions of both tubular members curve substantially in semi-circular form, such curved portions 18 being opposite in direction but substantially in alignment. The said tubes are preferably formed of metal and the straight portions thereof are inserted

into the ink bottle 1 through a perforation 5 provided in the cork closure thereof. The points of termination within the bottle of the two tubular members is an essential feature of the device for the accomplishment of the functions hereinafter set forth. The inner end 19 of the shorter member is positioned near the inner face 20 of the cork and the inner end 21 of the tube member 3 is positioned near the bottom of the bottle to insure said end thereof being immersed in the contained fluid when the receptacle is but partially filled.

The object to be attained is the forcing of the contained ink from the bottle through the tubular member 3 and out of the outer end 6 thereof where it may easily connect with a fountain pen reservoir or other receptacle which it is desired to fill with the fluid. This result is accomplished by the pneumatic bulb 7 secured by an air-tight joint 8 to the outer end 9 of the shorter tube member 4, said bulb being provided with an air valve or perforation 10 positioned centrally through the walls thereof.

It being highly desirable to provide a fountain pen filler normally in operative relation with an ink receptacle, said result is now accomplished and for making the same adaptable for traveling and in exigencies in which a complete closure of the receptacle to prevent spilling of the fluid is desired, I provide a valve mechanism therefor. This mechanism may be of any desired form for completely closing both tubes simultaneously and is preferably positioned outside the bottle and adjacent the cork thereof. The preferable construction, I have illustrated, in which a shaft 11 is positioned centrally through both of said contiguous tube members, being suitably journaled in alining perforations 12 through the walls thereof, said shaft having integrally or otherwise secured thereto circular disks 13, positioned within the tubes and of substantially the same diameter as the inner dimensions thereof. Said shaft extends exteriorly of the device and on one end thereof is provided a handle 14 for operating the same and on the opposite end thereof a nut 15 may be employed to impart additional rigidity to such mechanism. The disks 13 are adapted to completely close the tubes upon actuation of the handle 14 and may be furnished with peripheral packings such as 16.

Having thus described my invention the

operation thereof will be briefly set forth. Having the bottle partially filled with ink and the cork having my improved filling device positioned therein a slight pressure of the hand is imparted to the bulb 7 meanwhile holding closed the perforation 10 therein which forces the air into said bottle thereby ejecting a desired quantity of the ink through the tube end 6. The pressure of the air on top of the ink accomplishes said result but it is obvious that the same result would be gained with the bottle substantially filled with fluid when the inner ends of both tubes would be submerged. A slight back pressure may be gained which is desirable when the pen reservoir is overfilled, by allowing the perforation 10 to remain open during the exertion of pressure upon the operating bulb. The operation of the valve mechanism is clearly apparent, said valves allowing free passage of the fluid when positioned in alinement with the longitudinal axis of the tubes but completely prevent any flow whatever when in an opposite or transverse position within the same.

While the forms of my invention herewith disclosed and illustrated are what are believed to be preferable embodiments thereof, the right is however, reserved to make such minor changes in the matter of details form, size, and arrangement of parts as shall not depart from the spirit and scope of my invention as set forth in the following claims.

Having fully described my invention and in what manner the same is designed for use, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A device of the class described comprising curved tubular members having contiguous portions and synchronously operating valves positioned in said portions.

2. A device of the class described compris-

ing a long and a short tubular member, both of said members adapted to lie with a portion thereof within and without an ink receptacle, and operating means carried by the outer end of one of said members and a valve controlling the passage through said tubular members.

3. A device of the class described comprising in combination with a bottle closure, a plurality of curved tubes, a controlling valve positioned in each of said tubes, an air bulb carried by the outer end of one of said tubes, and a perforation provided in the latter.

4. A device of the class described comprising in combination with an ink receptacle and the closure cork therefor, two contiguous tubular members oppositely curved at their outer ends, said cork provided with a perforation receiving said tubular members closely fitting therein, the outer end of one of said members provided with an air bulb, said bulb provided with an air valve, the outer end of the other of said tubes terminating substantially at the level of the bottle top, alining disk valves positioned in said tubes, and an operating member provided therefor.

5. A device of the class described comprising a plurality of tubular members, and a valved air bulb secured to one of the same, a shaft extending through said members, disk-valves secured to said shaft and positioned in each of said members, said disks alining with each other, and an operating means therefor.

In testimony whereof I affix my signature in presence of two witnesses.

MYRON T. FISH.

Witnesses:

C. H. BROOKS,

F. T. BROOKS, 2nd.