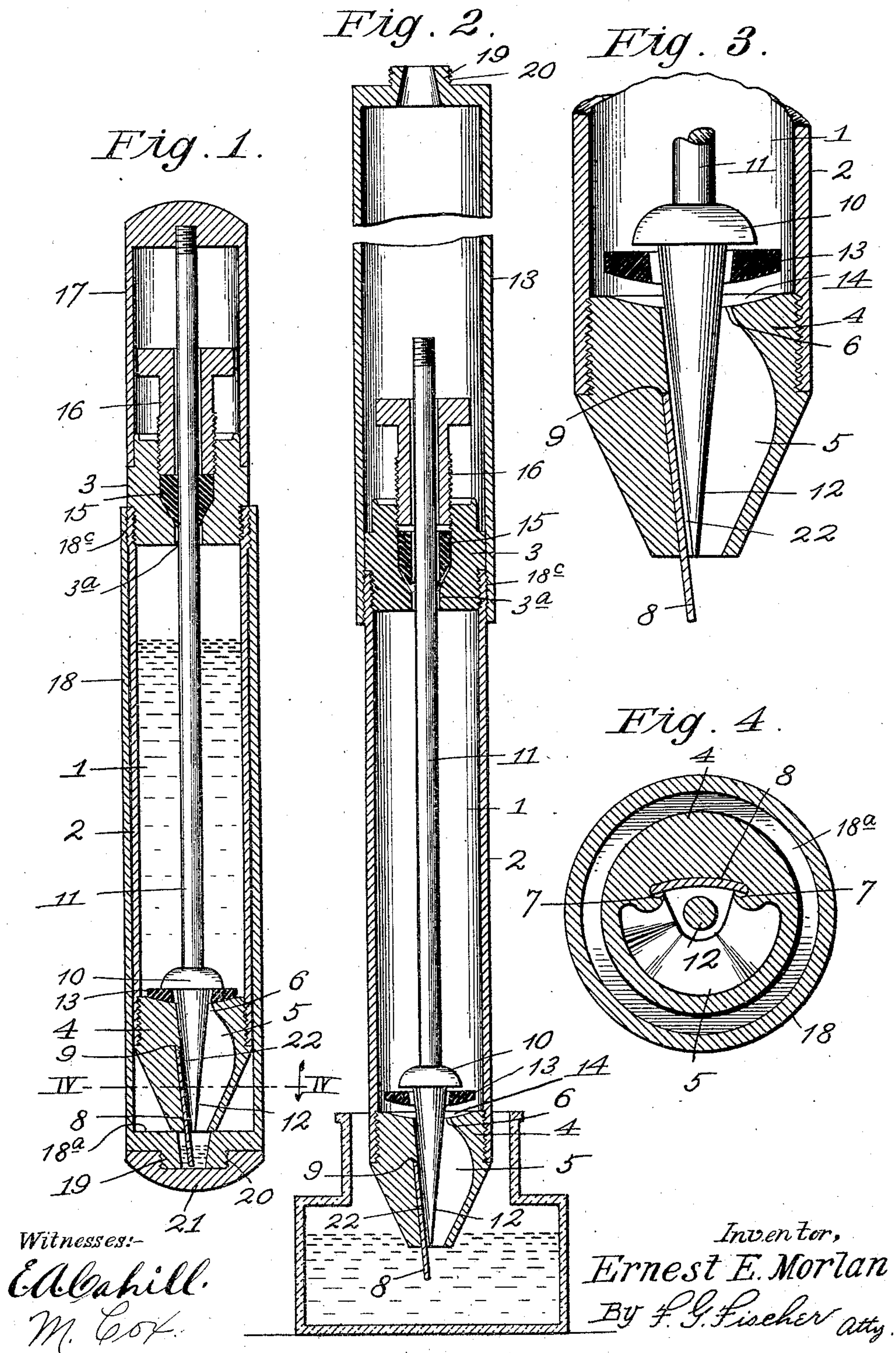


945,043.

Patented Jan. 4, 1910.



UNITED STATES PATENT OFFICE.

ERNEST EARLE MORLAN, OF GARDEN CITY, MISSOURI.

FOUNTAIN-PEN.

945,043.

Specification of Letters Patent.

Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, ERNEST E. MORLAN, a citizen of the United States, residing at Garden City, in the county of Cass and State of Missouri, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

My invention relates to improvements in fountain-pens, and one of my objects is to provide two simple means whereby the main reservoir may be quickly filled without removing any of the interior parts of the fountain-pen.

A further object is to provide means for controlling the flow of ink to the pen-point to avoid blotting.

A further object is to provide means for submerging the pen-point so that it will be ready for use without shaking the fountain-pen to start the ink to flowing.

Another object is to provide a feeding arrangement that will not require fine adjustment of the pen-point.

Other features of the invention will hereinafter appear, and in order that it may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 represents a vertical sectional view of my improved fountain-pen, the parts being in position for carrying the same in the pocket. Fig. 2 is a vertical section of the fountain-pen with the parts arranged for filling the reservoir with ink. Fig. 3 is an enlarged broken section of the lower portion of the fountain-pen. Fig. 4 is an enlarged cross section on line IV—IV of Fig. 1.

1 designates a main reservoir consisting of a barrel 2, partly closed at its ends by plugs 3 and 4, which latter is conical at its lower portion and provided with an auxiliary reservoir 5, communicating with the main reservoir through a port 6. Plug 4, which is hereinafter termed the pen-holding plug, has a pair of grooves 7 for the reception of a pen 8, the insertion of which is limited by its upper end contacting with a shoulder 9. This arrangement permits a common pen to be employed as the fine adjustment between the pen and the feed-mechanism required in a number of fountain-pens now on the market is unnecessary.

The flow of ink from the main reservoir to the auxiliary reservoir and pen 8 is con-

trolled by a valve 10 provided with a stem 11, the upper portion of which extends through a central opening 3^a in plug 3, while its lower conical portion 12 extends downwardly and terminates a short distance above the lower end of pen 8.

13 designates a washer interposed between valve 10 and the upper end of the pen-holding plug, which latter has a concave recess 14, in which the washer is seated by valve 10 when it is desired to close communication between the reservoirs. Plug 3 is provided with packing 15 and a nut 16 surrounding the upper portion of stem 11 to prevent the ink from flowing through opening 3^a when the fountain-pen is inverted. Nut 16 and the protruding end of stem 11 are inclosed in a cap 17, loosely engaging plug 3 and screwed upon the threaded upper end of stem 11, so that the valve may be adjusted to open or close port 6 by raising or lowering the cap.

18 designates a sheath which performs the double function of protecting the pen-point when not in use, and forming means whereby reservoir 1 may be filled with ink. Said sheath is open at one end so that it may be slipped upon either end of barrel 2, and is provided with a mouthpiece 19 having threads 20 whereby an internally threaded screw-cap 21 may be secured thereon for closing the mouthpiece, so that the same will hold ink when in the position shown in Fig. 1. To prevent ink flowing from the mouthpiece to the exterior of the pen-holding plug 4 while being carried in the pocket, I hold the lower end 18^a of the sheath tightly against the lower end of said plug. This is accomplished by providing the open end of the sheath with internal screw threads 18^c which engage external threads on the upper end of barrel 2.

Reservoir 1 may be filled with ink by removing the pen-holding plug and pouring the ink directly into the reservoir, in which instance the mouth of the bottle containing the ink is placed in contact with the projecting conical portion 12 of the valve-stem, so that the ink will follow the same into the main reservoir. The main reservoir may also be filled by first loosening nut 16 and packing 15 so that air may pass upward through opening 3^a, sheath 18 is then screwed upon the upper end of the reservoir, as shown in Fig. 2, and cap 21 is removed so that the mouth may be applied to mouthpiece 19 for

the purpose of exhausting the air from the reservoir to draw the ink therein.

While the pen is being used to write with, the valve is left in a raised position, see Fig. 2, where it is held by frictional contact with the packing 15. As the writing proceeds the ink will flow down the narrow channel 22, between the conical portion 12 of the valve-stem, the wall of reservoir 5, and the pen 8 because capillary attraction is greater at this point than in reservoir 5, which latter is provided principally to receive the excessive flow from the main reservoir as hereinafter described. As the ink flows from the main reservoir its place will be taken by air entering therein through port 6.

Should the air in the main reservoir expand from becoming warm and force an excessive quantity of ink therefrom, the excess ink will not flow immediately to the pen-point and blot the paper, but will enter the auxiliary reservoir 5 and be directed, as needed, by the reduced lower sloping portion thereof to the pen-point and channel 22.

When the fountain-pen is not in use, sheath 18 with cap 21 thereon is adjusted to the position shown in Fig. 1, to protect the pen-point, which latter extends downward into the mouthpiece 19 and is constantly submerged in ink which flows into said mouthpiece from the auxiliary reservoir by way of pen 8. By thus submerging the pen-point the fountain-pen will be ready for use without shaking the same to start the ink from the main reservoir.

Having thus described my invention, what I claim is:—

1. A fountain-pen consisting of a main reservoir, a stationary pen, an auxiliary reservoir communicating with the main reservoir through a port of less diameter than either of the reservoirs, said auxiliary reservoir having a lower reduced portion sloping toward the pen-point which is inserted therein, and movable means for controlling the flow of ink from the main reservoir to the auxiliary reservoir, provided with a stem which in conjunction with the pen and the adjacent inner surface of the auxiliary reservoir form a channel for the purpose described.

2. A fountain-pen consisting of a main reservoir, a channel leading therefrom, a pen communicating with said channel, a sheath adapted to slip upon either end of the reservoir, provided with a mouth-piece through which air may be exhausted from said reservoir when the sheath is applied to its upper end, and to receive the pen-point when said sheath is slipped over the lower end of the reservoir, and a cap for closing the mouth-piece when the sheath is in the last-mentioned position.

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

ERNEST EARLE MORLAN.

Witnesses:

J. M. LUSBY,

W. A. KIMBERLIN.