

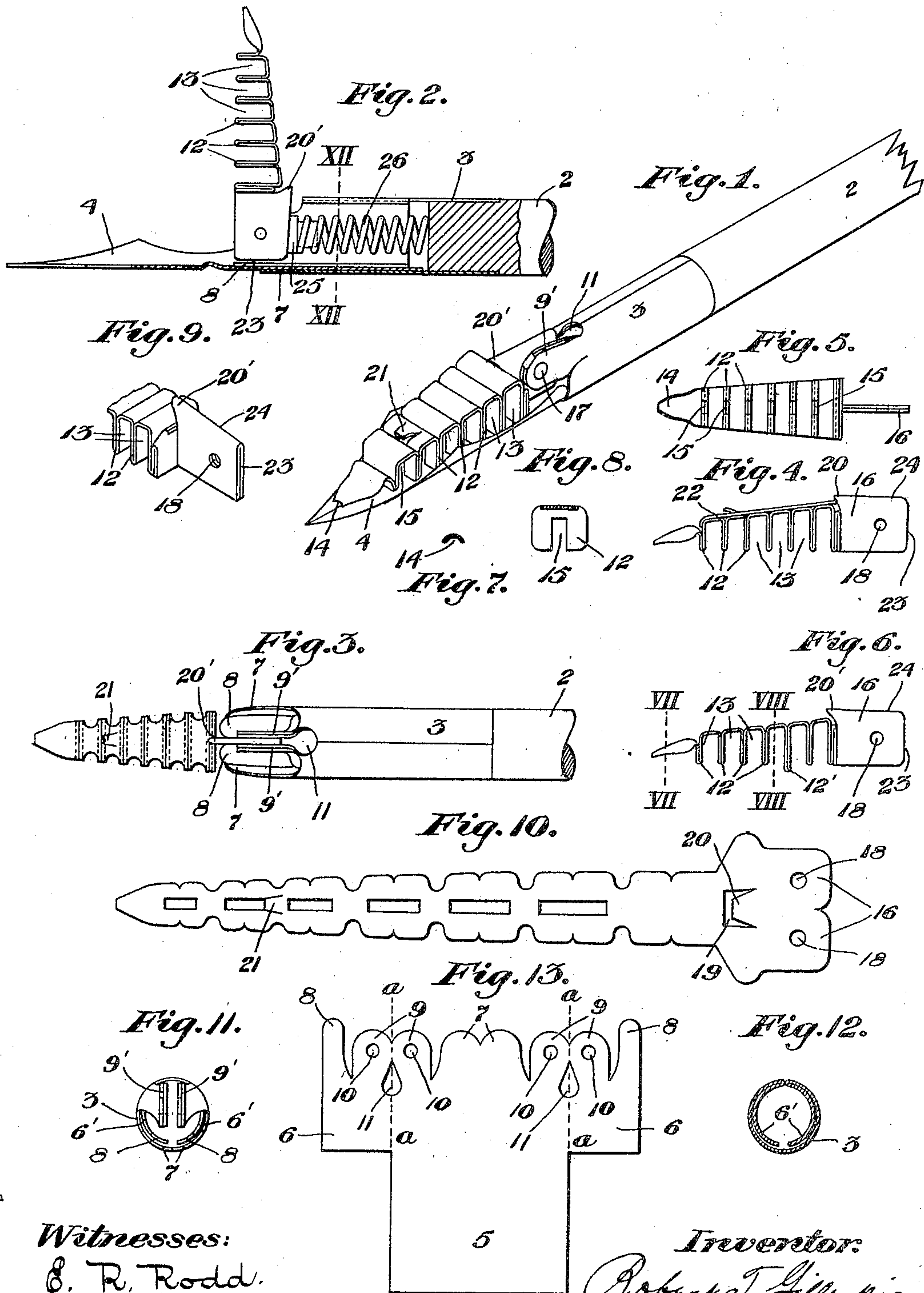
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R. T. GILLESPIE.

RESERVOIR PEN.

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UNITED STATES PATENT OFFICE.

ROBERT T. GILLESPIE, OF LISBON, OHIO.

RESERVOIR-PEN.

No. 812,647.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT T. GILLESPIE, a citizen of the United States, residing at Lisbon, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Reservoir-Pens, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of the specification, in which—

Figure 1 is a perspective view of my improved reservoir-pen. Fig. 2 is a longitudinal sectional view showing the lid raised. Fig. 3 is a plan view of the ferrule and ink-retaining lid, the latter being in a lowered position. Fig. 4 is a side view of one form of my improved lid. Fig. 5 is an under plan view of Fig. 4. Fig. 6 is a view similar to Fig. 4, showing a modified construction. Figs. 7 and 8 are vertical sectional views on the lines VII VII and VIII VIII, respectively, of Fig. 6. Fig. 9 is a partial perspective view of the lid, showing the construction of the rear end. Fig. 10 is a plan view of the blank from which the lid is formed. Fig. 11 is an end view of the ferrule, the lid having been detached. Fig. 12 is a vertical sectional view on the line XII XII of Fig. 2, showing the construction of the ferrule. Fig. 13 is a plan view of the blank from which the ferrule is made.

My invention relates to improvements in reservoir-pens, more particularly to that class of pens wherein the ink is stored between the pen-point and an adjacent closing chambered lid or wall, and it refers to the particular construction and arrangement of such wall, which is made in cellular form, so as to provide a large ink-holding capacity in such a manner as to facilitate free flow and entire drainage of the ink.

The invention also refers to an improved ferrule construction with which the lid is incorporated and to various other features of advantage and novelty, as shall be more fully hereinafter set forth.

The present invention constitutes an improvement on that form of penholder shown and described in Letters Patent No. 711,958, granted to me October 28, 1902, and is designed to simplify, lighten, and cheapen the construction and to secure better results.

Referring now to the drawings, 2 is the main stem of the holder, to the lower extremity of which is secured in any suitable or preferred manner the ferrule 3, adapted to re-

ceive and hold the pen-point 4 between its inner and outer walls, the ferrule being adapted to hold any of the various shapes of commercial writing-pens at present in use. The ferrule 3 is formed of a single blank of thin sheet metal, as shown in Fig. 13, having a rear portion 5, adapted to be bent around into cylindrical form and to embrace the point of the penholder-stem, also lateral wing portions 6 6, adapted to be redoubled upon the lines *a a* to provide the inner walls 6', between which and the outer main cylindrical portion 3 the shank of the pen-point is held in an intervening space, as clearly shown in Figs. 11 and 12. At the central front portion of the blank it is formed with a single or double rounded extremity 7, while the front terminals of wings 6 extend somewhat beyond its central extremity, providing terminals 8 8, which when bent into interior cylindrical form lie closely adjacent to the central terminal or terminals 7, extending slightly beyond them, so as to facilitate the introduction of the pen-point shank in the same manner as is usual in an ordinary penholder. The blank is also provided with doubled hinge-bearing cheeks 9 9, located on each side of the parting lines *a a*, perforated at 10, the metal being preferably cut out at 11 and the cheeks being joined together on the bending-line between the pivoting-openings 10, as clearly shown in Fig. 13. As thus constructed when the wings 6 are bent inwardly to form the inner ferrule these cheeks are doubled upon themselves and are then twisted around closely adjacent to each other, as shown in Figs. 1, 3, and 11, providing the pivotal bearings 9' for the ink-retaining lid. By this construction the ferrule is rendered very light, strong, and stiff and well adapted to the objects in view.

The lid shown in the principal figures of the drawings is formed of a single blank of thin sheet metal, preferably aluminium, to insure lightness, made in the form shown in Fig. 10. This blank is doubled upon itself into a series of double cross-walls 12, providing intervening apertures 13, a series of which are located longitudinally of the cover and extend across it from side to side, the top portion being formed of a series of connected flat arches. The tip of the lid terminates at its forward end in a tapered point having a rounded upper portion providing a concave under part, forming a feeding-channel 14, adapted to lie adjacent to the tip of the pen-

point and in close proximity thereto. By this construction the ink will flow freely to the pen-point, but will be retained by capillary attraction against a too free flow or the formation of a drop. At the same time the feeding-channel is always maintained open, so as to insure feed of the ink to the pen-point as long as any ink remains in the lid, thus preventing the pen from running dry before exhausting all of the ink. A central longitudinal channel 15 is formed by cutting through the doubled walls 12, as clearly shown in Figs. 5 and 8, and as thus constructed it will be seen that there is continuous communication between the series of cross-channels 13, the central channel 15, and the delivery-groove 14. It also follows that the storage capacity of these cross-channels is sufficiently great to hold a very considerable body of ink, while the walls are sufficiently close together and so extremely thin that all of the ink will be held by capillary attraction, and the weight of the lid is reduced to a minimum. This results in an easy feed and flow of the ink. The lid is comparatively light in weight and is very easily cleaned by a brush. At its back portion the blank terminates in hinge-cheeks 16, which are closed together upon themselves, as shown in Fig. 9, providing a double-hinge extremity adapted to be secured between the hinge-cheeks 9' by a suitable pin or rivet 17, passing through apertures 18. The blank is also cut out, as indicated at 19, providing a lip 20, which when the blank is folded together projects upwardly above the main body portion, as shown in Fig. 9, providing a lifting extremity 20', by which the lid may be raised by the finger-nail. A similar lip 21 is also formed, if desired, at the front portion of the blank for a similar purpose, and by either of these lips it will be seen that the lid may be readily raised into the position shown in Fig. 2. If desired, the lid may be provided with a reinforcing top plate 22, as shown in Fig. 4, which may also be provided with a lifting-lip, although ordinarily such a plate will not be required. The back extremity of the lid terminates in a square end, as shown, providing separate bearing-faces 23 24, against which abuts the terminal 25 of a compression-spring 26, secured within the interior of the ferrule in any suitable manner and adapted to bear outwardly against the end of the lid in either raised or lowered position. By this means the lid will be maintained either opened or closed with sufficient pressure to insure its location by reason of the constant outward pressure of the spring against one or the other of the faces 23 or 24.

In Fig. 6 I have shown one of the doubled cross-partitions 12', extending downward slightly below the general bottom plane of the others and adapted to bear against the body portion of the pen-point, so as to keep

the tip raised from contact, and it will be understood that this means may be employed or that any other suitable projection may extend outwardly, so as to make such contact, thus holding the lid at the desired distance from the point. As thus constructed the entire lid and point may be dipped into the ink and will become charged with a very considerable body of fluid, which may be used for continuous writing for a comparatively long period without recharging.

It will be understood that the drawings are made to an increased scale for the purpose of illustration and that the device is to be made commercially to conform to any size or measurements desired for use.

What I claim is—

1. A penholder provided with means for holding a pen-point, a pivoted lid provided on its under side with a series of cross doubled walls, intervening spaces adapted to hold the ink by capillary attraction and to form with the pen an ink-holding cavity, and a spring mounted in the interior of the holder adapted to exert pressure against the rear portion of the lid to hold it in a raised or lowered position, substantially as set forth.

2. A penholder provided with means for holding a pen-point, a pivoted lid provided on its under side with a series of cross doubled walls, intervening spaces adapted to hold the ink by capillary attraction and to form with the pen an ink-holding cavity, with a terminal tip having a feeding-groove on its under side, and a spring mounted in the interior of the holder adapted to exert pressure against the rear portion of the lid to hold it in a raised or lowered position, substantially as set forth.

3. A penholder provided with means for holding a pen-point, a pivoted lid provided on its under side with a series of cross doubled walls, a longitudinal channel formed by cutting through said walls transversely, intervening spaces adapted to hold the ink by capillary attraction and to form with the pen an ink-holding cavity, and a spring mounted in the interior of the holder adapted to exert pressure against the rear portion of the lid to hold it in a raised or lowered position, substantially as set forth.

4. The combination with a ferrule, of a pivoted lid formed of a sheet-metal blank doubled to provide a series of cross-walls and intervening apertures, substantially as set forth.

5. The combination with a ferrule, of a pivoted lid formed of a sheet-metal blank doubled to provide a series of cross-walls and intervening apertures, with a terminal grooved tip, substantially as set forth.

6. The combination with a ferrule, of a pivoted lid formed of a sheet-metal blank doubled to provide a series of cross-walls and intervening apertures, a longitudinal chan-

nel formed by cutting through said cross-walls, with a terminal grooved tip, substantially as set forth.

5 7. The combination with a ferrule, of a pivoted lid formed of a sheet-metal blank doubled to provide a series of cross-walls and intervening apertures, a longitudinal channel formed by cutting through said cross-walls, and a terminal grooved tip, with a
10 spring mounted in the ferrule adapted to bear against the rear end of the lid to hold it in a raised or lowered position, substantially as set forth.

15 8. The combination with a ferrule, of a pivoted lid formed of a sheet-metal blank doubled to provide a series of cross-walls and intervening apertures, a longitudinal channel formed by cutting through said cross-walls, and a terminal grooved tip, and pro-
20 vided with a projecting lifting finger-piece, substantially as set forth.

9. A ferrule consisting of a sheet-metal

blank bent into cylindrical form, provided with lateral inwardly-turned wings at its front portion adapted to form an interior 25 ferrule with an intervening pen-holding space, and doubled lid-pivoting cheeks projecting from said front portion, substantially as set forth.

10. A ferrule consisting of a sheet-metal 30 blank bent into cylindrical form, provided with lateral inwardly-turned wings at its front portion providing an interior ferrule with an intervening pen-holding space, and providing inner and outer extremities, one of 35 which projects beyond the other, with doubled lid-pivoting cheeks, substantially as set forth.

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

ROBERT T. GILLESPIE.

Witnesses:

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