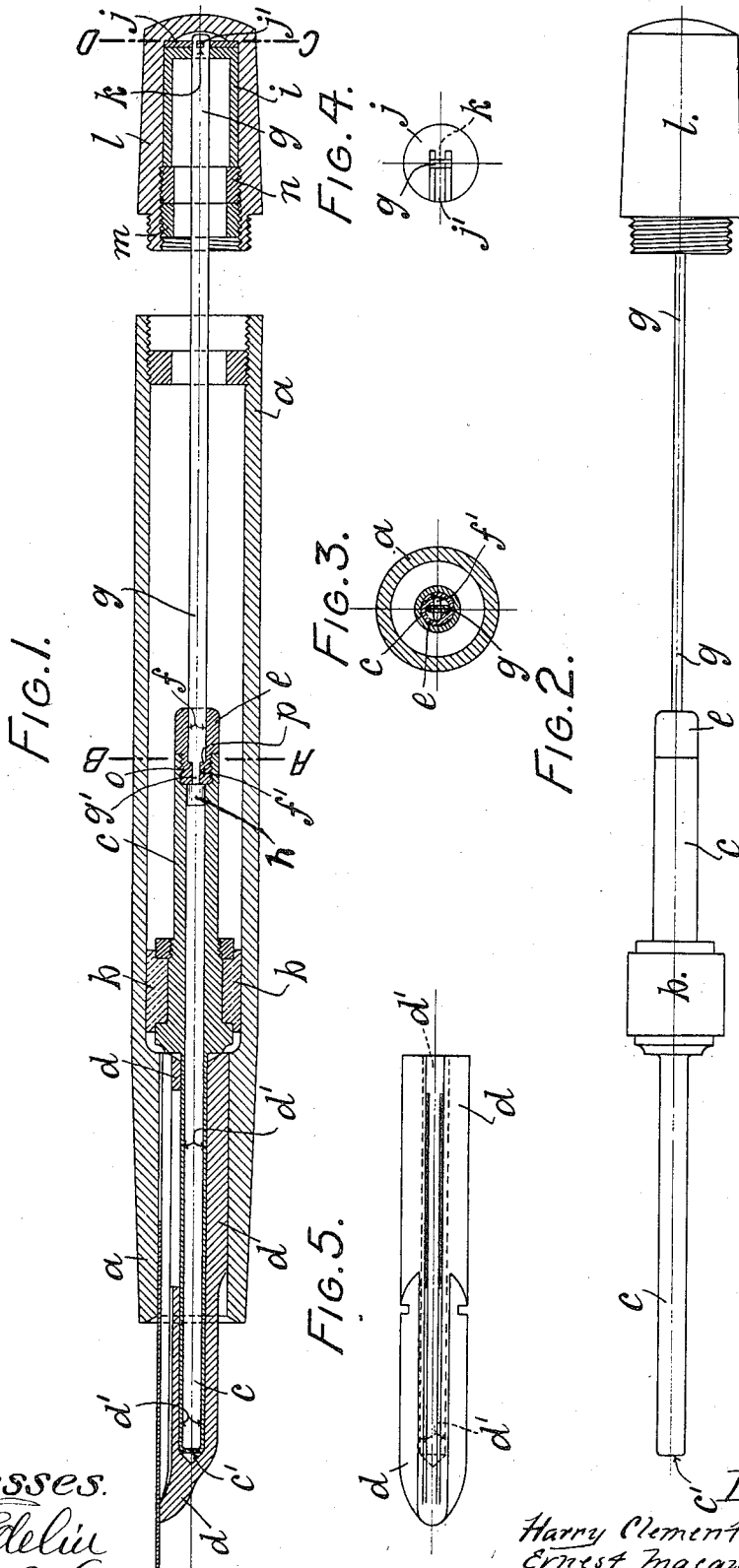


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 FOUNTAIN OR RESERVOIR PEN.  
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1,124,454.

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Witnesses:  
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# UNITED STATES PATENT OFFICE.

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FOUNTAIN OR RESERVOIR PEN.

1,124,454.

Specification of Letters Patent.

Patented Jan. 12, 1915.

Application filed July 18, 1912. Serial No. 710,224.

To all whom it may concern:

Be it known that we, HARRY CLEMENT JOHNSON and ERNEST MACAULEY WADE, subjects of the King of England, residing at 13 Hope street, Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in or Relating to Fountain or Reservoir Pens, of which the following is a specification.

This invention relates to self-filling fountain or reservoir pens of the type in which the barrel or reservoir for containing the ink is filled or charged by a plunger within it; and refers more particularly to that kind of such pen in which there is attached to the plunger an imperforate sheath wherein the plunger actuating rod or bar—which is normally not detachable from the plunger—is adapted to lie until it is required to actuate said plunger.

In a fountain or reservoir pen embodying our improvements there is secured to the plunger, in any convenient manner, a sheath or casing constructed of suitable material impervious to ink—as vulcanite—and closed at its inner or lower end, and which essentially extends below, or beyond the inner end of, the plunger. Said sheath or casing is adapted to receive and contain the plunger actuating rod or bar; and, if necessary or desirable, the “feed” or “feeder” of the pen is provided with a longitudinal cavity or recess for the purpose of receiving the inner portion of said sheath or casing when the plunger is pushed inwardly preparatory to the filling or charging of the pen with ink, in order that the stroke of the plunger may be as long as practicable. Suitable ink ducts connect said cavity—the mouth of which may be flared or bell shaped—with the outer portion of the feed or feeder. For the purpose of preventing said plunger actuating rod or bar from being detached from the plunger or the sheath connected therewith, any simple locking arrangement may be employed whereby in one position the actuating rod is free to pass into said sheath or casing, and when withdrawn to its fullest permissible extent, and, say, turned through 90 degrees, is so locked that the plunger may be forced into the reservoir or barrel by it. Preferably, said plunger actuating rod or bar is connected in a revoluble manner to a cap which is adapted to be

screwed or pushed onto or into the body of the pen.

In the annexed drawing: Figure 1 is a longitudinal section of a self filling fountain or reservoir pen, according to our invention. Fig. 2 is a detached view of the sheath or casing with plunger, and the actuating rod or bar with cap revolubly connected therewith. Fig. 3 is a transverse section, taken as on line A—B Fig. 1. Fig. 4 is a plan view taken as on line C—D, Fig. 1. Fig. 5 is a detached view of the ink feed or feeder.

*a* represents the body or barrel of the pen, and *b* the plunger which is secured to a rigid or non-collapsible sheath or casing *c* closed at its lower or inner end *c*<sup>1</sup>. *d* is the feed or feeder provided with a cavity or recess *d*<sup>1</sup> adapted to receive the inner or lower portion (*i. e.* the part which extends below the plunger) of said sheath or casing *c*. To the upper end of said sheath or casing *c* is screwed a stop piece *e* provided with a passage *f f*<sup>1</sup>; the lower portion *f*<sup>1</sup> whereof is of greater width in one direction than in the other (Fig. 3). *g g*<sup>1</sup> is a metal plunger-actuating strip or rod which is adapted to make a sliding fit with the lower portion *f*<sup>1</sup> of said passage *f f*<sup>1</sup> of stop piece *e*; the lower end of said strip or rod is reduced at *g*<sup>1</sup> and is provided with a cylindrical guide-stop *h*, which prevents said strip *g, g*<sup>1</sup> from being pulled completely out of sheath *c*. The upper end of said strip or bar is detachably secured to an inner cap *i* by means of a tongue *j*<sup>1</sup> formed out of a metal disk *j* adapted to lie upon said cap *i*, which tongue *j*<sup>1</sup> passes through an aperture *k* formed in the upper end of said strip or rod *g g*<sup>1</sup>. Said inner cap *i* fits in a friction tight manner within an outer cap *l*, the friction grip between the two caps being only such as will insure the partial rotation or turning of said strip or rod *g g*<sup>1</sup> when said cap *l* is turned by the fingers, but is not sufficient to interfere with or retard the screwing of cap *l* to the upper end of the pen barrel.

*m n* indicate stop rings provided for the purpose of limiting the upward travel of said plunger within barrel *a*, and for maintaining the inner cap *i* in position within the outer cap *l*.

As illustrated in Fig. 1 of the drawings, plunger *b* has been forced downwardly

within barrel *a*—preparatory to the charging of the pen with ink—by said actuating strip or rod *g g*<sup>1</sup> through the contact or engagement of the shoulders *o* thereof with the shoulders *p* of the stop piece *e*; when plunger *b* has been raised on the filling of the pen said strip or rod *g, g*<sup>1</sup> is turned through a right angle and passed into said sheath or casing *c*, and cap *l* is screwed on to the upper end of the barrel *a*.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A self filling reservoir pen, comprising a barrel, a sheath reciprocally supported within said barrel and provided with a piston, a plunger carried by said sheath intermediate the ends thereof, said sheath extending a substantial distance beyond the plunger at both ends, and a rod in detachable engagement with the outer end of the sheath to reciprocate it and the piston carried thereby, the sheath receiving the rod

therewithin when the rod is detached therefrom.

2. A self filling reservoir pen, comprising a barrel, a sheath reciprocally supported within said barrel and provided with a piston, a plunger carried by said sheath intermediate the ends thereof, said sheath extending a substantial distance beyond the plunger at both ends, a rod in detachable engagement with the outer end of the sheath to reciprocate it and the piston carried thereby, the sheath receiving the rod therewithin when the rod is detached therefrom, and an ink feeder provided with a recess adapted to receive the lower end of said sheath.

In testimony whereof we affix our signatures in presence of two witnesses.

HARRY CLEMENT JOHNSON.  
ERNEST MACAULEY WADE.

Witnesses:

JOHN H. WALKER,  
H. WATSON.