No. 772,554. PATENTED OCT. 18, 1904.

J. H. BULLARD.

FOUNTAIN PEN.

APPLICATION FILED JUNE 14, 1904.

NO MODEL.

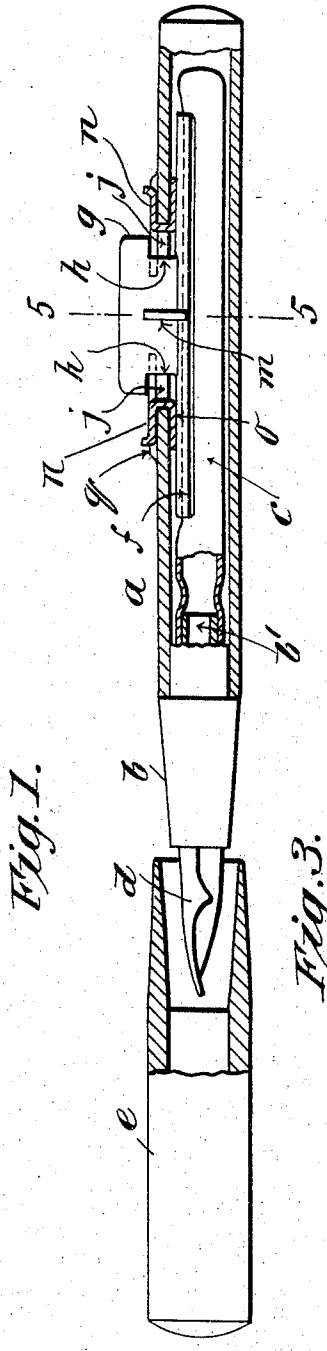

Fig. 1.

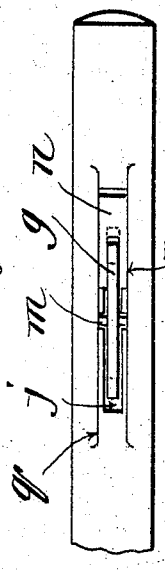

Fig. 2.

Fig. 4.

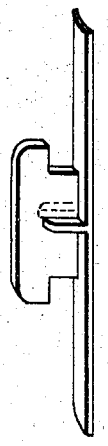

Fig. 3.

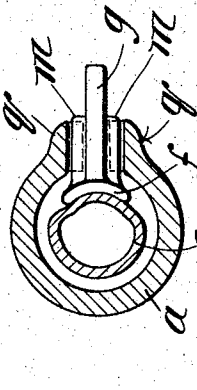

Fig. 5.

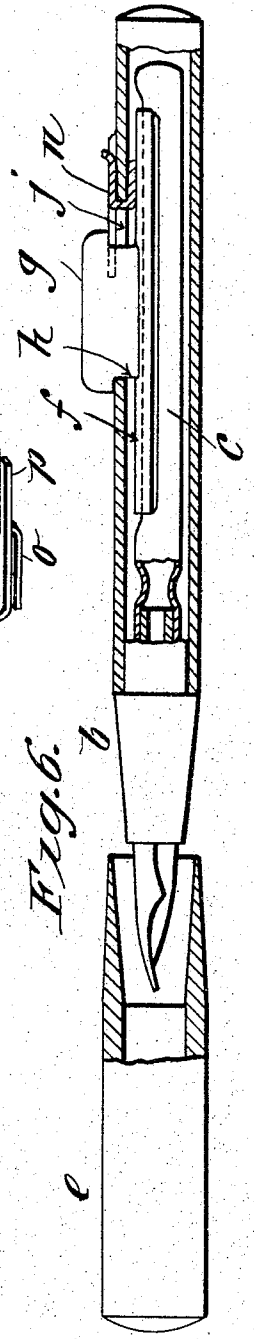

Fig. 6.

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No. 772,554. Patented October 18, 1904.

# UNITED STATES PATENT OFFICE.

JAMES H. BULLARD, OF SPRINGFIELD, MASSACHUSETTS.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 772,554, dated October 18, 1904.

Application filed June 14, 1904. Serial No. 212,492. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. BULLARD, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to fountain-pens, and has special reference to that class of pens in which the ink is carried in a compressible reservoir within the handle, whereby by the compression thereof the expansive action of the reservoir will draw the ink into it for refilling.

The object of this invention is to provide improved means whereby the compression of the reservoir is effected, including devices for rendering these means inoperative under normal conditions; and the invention consists in the construction described in the following specification and clearly pointed out in the claims appended thereto.

In the drawings forming a part of this application, Figure 1 is a sectional elevation of a pen having this invention applied thereto, the reservoir-compressing devices being shown ready for operation. Fig. 2 is a plan view of a portion of the penholder shown in Fig. 1 with one of the locking-slides removed. Fig. 3 is a perspective view of the reservoir-compressing device. Fig. 4 is a perspective view of one of the locking devices for the compressing device; and Fig. 5 is a transverse section of the pen, somewhat enlarged, the section being on line 5 5, Fig. 1. Fig. 6 is a view similar to Fig. 1, showing a modification of the construction embodied in said Fig. 1.

Referring now to the drawings, *a* indicates the handle portion of the pen, which is a hollow cylindrical construction with one closed end, made of any suitable material, as hard rubber, in the manner usual in this class of constructions, and in the open end thereof is a pen-holding plug *b*, which may be either tightly fitted therein or screwed in, as desired. In the drawings it is shown as fitting tightly in the portion *a*, and on the rear end thereof is a tubular projection *b'* of reduced diameter, over which projection is secured the open end of a rubber tube *c*, the opposite end of which is closed. This tube constitutes an ink-reservoir and extends nearly or quite to the end of the handle portion *a*, the walls thereof being made of sufficient thickness to cause them to expand when pressed together, whereby a suction effect may be produced to draw ink through the usual opening in the plug *b*, (not shown in the drawings,) which extends through the latter and through the projection *b'* to the under side of the pen *d*, fitted into said plug. The plug is provided with the usual cap *e* to inclose the pen-holding end thereof when the pen is not in use.

The compressing device for the reservoir *c* consists of a long bar *f*, lying between the side of the reservoir and the inner wall of the handle portion *a* of the pen, said bar being preferably somewhat curved in cross-section to correspond with the curve of the ink-reservoir, extending over the top and down at the sides thereof more or less, as shown in the cross-sectional view in Fig. 5. Secured to this bar is a thumb-piece *g*, which is located about centrally between the ends and between the sides thereof, the ends of said thumb-piece contiguous to the bar being cut away to form a notch, (indicated at *h*,) the handle portion *a* being provided with a slot *j*, through which this thumb-piece extends.

As shown in Figs. 1 and 2, a vertical rib *m* is located on each side of the thumb-piece *g*, which ribs enter vertically-disposed slots in the edges of the slot *j* and serve to guide the thumb-piece *g* and the bar *f* in their vertical movements.

Locking devices are provided to secure the thumb-piece *g* in fixed position relative to the handle portion and consist in two slidable locking-plates *n*, one of which is shown in perspective in Fig. 4. These may be made of thin sheet metal, out of one end of which a tongue *o* is cut and bent downwardly and backwardly, as shown in the drawings, to engage the walls of the handle portion *a* at each end of the slot *j*. The width of this tongue is somewhat greater than the thickness of the thumb-piece *g* and when cut out of the locking-plates *n* and bent backward, as shown, results in the formation of the fork in the end of the locking-plate, whose two arms *p* are lo-

cated each side of the thumb-piece *g*, the proportion of the tongue and the fork being such that when the plate is moved toward the center of the thumb-piece the vertical ribs *m* will serve as a stop against which the ends of the fork may bear, the tongue *o* being long enough to remain in engagement with the wall of the handle portion *a* when the locking-plate is in this position, the body of the plate being then located in the notches *h* of the thumb-piece.

When the locking-plate *n* is drawn back to the position shown in Fig. 1, it will come to a stop against the end of the slot *j* and the thumb-piece *g* and the bar *f* may then be depressed to effect the compression of the ink-reservoir to fill the latter. The outer ends of this plate are turned upward slightly to permit them to be engaged by the finger-nail to slide them.

To give the handle portion *a* a finished appearance and also to provide guides for the locking-plates *n*, two ribs *q* are preferably molded on said handle portion, as shown in the various figures of the drawings, although these are not essential, for the engagement of the slide with said handle portion by means of the tongue *o* and the engagement of the fork with the thumb-piece will maintain said locking-plate in operative position relative to said thumb-piece.

In Fig. 6 a modification of the above construction is shown whereby one sliding locking-plate is done away with. In said construction the thumb-piece *g*, the bar *f*, and one locking-plate are made and applied to the pen in precisely the same manner as in the construction shown and described in Fig. 1 except that the vertical ribs *m* are not applied to the thumb-piece. In this construction when the sliding locking-plate is drawn back, as shown in said Fig. 6, the thumb-piece and the bar *f* must be moved endwise far enough to disengage the notch *h* at one end of the thumb-piece *g* with the end of the slot *j*, whereupon the thumb-piece and bar may be depressed, as hereinbefore described, and to lock the thumb-piece the latter may be pushed toward that end of the slot opposite to that in which the sliding locking-plate *n* is mounted to the position shown in Fig. 6 and the plate *n* then pushed forward to lock the same in the same manner as the locking is effected in the construction shown in Fig. 1.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination in a fountain-pen having a slot in the wall thereof, of an elastic compressible ink-reservoir, a thumb-piece extending through said slot and bearing on the reservoir, and a locking device to secure the thumb-piece to the pen, said device being slidable on the pen lengthwise thereof into and out of engaging position with said thumb-piece.

2. The combination in a fountain-pen having a slot in the wall thereof, of an elastic compressible ink-reservoir, a thumb-piece to bear on the reservoir and extending through said slot, said thumb-piece having an engagement with the side of said slot to hold the thumb-piece against endwise movement therein, together with a locking device to lock the thumb-piece to the pen immovably.

3. The combination in a fountain-pen having a slot in the wall thereof, of an elastic compressible ink-reservoir, a thumb-piece extending through said slot and bearing on the reservoir, and a slidable locking device movable in said slot toward and from the thumb-piece, into and out of engagement with the latter.

4. A fountain-pen comprising a tubular handle portion having a longitudinally-disposed slot extending through the wall thereof; the two opposite sides of said slot having raised borders, a thumb-piece extending through the slot, a compressible ink-reservoir within the pen on which said thumb-piece bears, and a slidable locking device located between the raised borders of said slot and movable into and out of locking engagement with the thumb-piece.

5. A fountain-pen comprising a tubular handle portion having a longitudinally-disposed slot extending through the wall thereof, the two opposite sides of the said slot having raised borders; a thumb-piece extending through the slot, a compressible ink-reservoir within the pen on which said thumb-piece bears, and a slidable locking device for the thumb-piece located between the raised borders of the slot, one end of said device being forked and disposed along each side of the thumb-piece.

6. The combination with a fountain-pen provided with an elastic compressible ink-reservoir having a longitudinally-disposed slot in the wall thereof, of a thumb-piece extending through said slot in the wall of the pen bearing on said reservoir, a locking device for the thumb-piece movable lengthwise of the pen in engagement with said slot, said device being provided with a tongue extending through the slot and engaging the interior surface of the pen-body.

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