

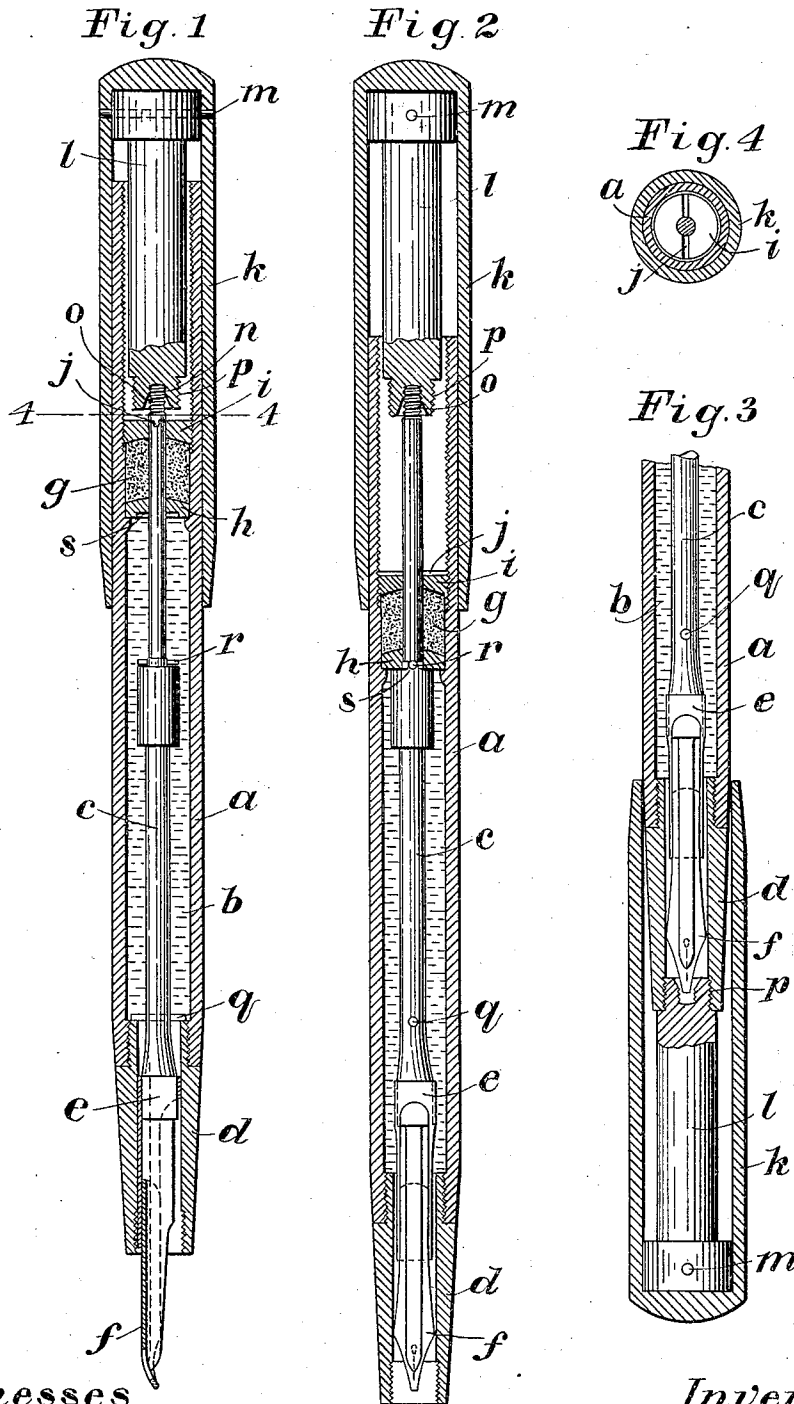
No. 768,779.

PATENTED AUG. 30, 1904.

H. W. STONE.  
FOUNTAIN PEN.

APPLICATION FILED AUG. 29, 1903.

NO MODEL.



Witnesses.  
Horace A. Crossman  
Thomas B. Smith

Inventor.  
Harry W Stone.  
by Frederick L. Emery  
Atty.

# UNITED STATES PATENT OFFICE.

HARRY W. STONE, OF BROOKLYN, NEW YORK, ASSIGNOR TO ARTHUR A. WATERMAN, OF WINCHESTER, MASSACHUSETTS, AND WILLIAM G. FRAZER AND HOBART W. GEYER, OF NEW YORK, N. Y., COPARTNERS, DOING BUSINESS AS A. A. WATERMAN & CO., OF NEW YORK, N. Y.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 768,779, dated August 30, 1904.

Application filed August 29, 1903. Serial No. 171,312. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY W. STONE, a citizen of the United States, residing at Brooklyn, in the city of New York, county of Kings, and State of New York, have invented an Improvement in Fountain-Pens, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention consists in an improved construction of fountain-pen, being particularly concerned with fountain-pens wherein the writing-pen is projected from or withdrawn into the lower end of the tip or feed section.

My invention will be best understood from the following description and accompanying illustration of one specific embodiment thereof, taken in connection with the accompanying illustrations, while its scope will be more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a longitudinal section of the fountain-pen with the pen extended and ready for writing. Fig. 2 is a similar section showing pen withdrawn within the feed-section. Fig. 3 is a view similar to Fig. 2, showing, however, the cap removed from the top of the penholder and secured over the feed-section. Fig. 4 is a section taken on the line 4 4 in Fig. 1.

In the drawings, *a* is the pen-barrel containing the ink-reservoir *b*, through which extends the pen operating or propelling rod *c*, provided at its end near the feed-section *d* with a sleeve or nozzle *e*, of silver or other suitable material, into which the writing-pen *f* is fitted and by which it is secured to the propelling-rod *c*. At its opposite or upper end the rod *c* passes through and is slidable within an ink-tight packing, preferably of cork. This cork packing *g* abuts against a suitable surface within the ink-barrel, such as is provided by the fixed washer *h*, against which it is pressed by the threaded cap *i*, the latter being provided with a slot *j*, by which the cap may be screwed within the threaded bore of the barrel end down and against the cork

packing to retain the latter in position, as well as to increase the pressure on the packing if the latter or the rod become so worn as to cause leakage. The provision of the slot *j* permits the insertion of a screw-driver or other suitable tool within the end of the barrel to effect this latter adjustment or to permit the removal of the cap when necessary.

I have herein shown the surface of the washer *h* in contact with the packing as convex and that of the threaded cap *i* in contact with the packing as concave. When the cap and washer are brought relatively nearer together, they not only compress the cork packing, but there is a separate wedging effect exerted thereupon by both the cap and washer. The convex surface of the washer is so inclined that it causes the packing to be forced or wedged outward against the inner walls of the barrel, the extent or degree of wedging force being dependent upon the compression exerted upon the cork and the inclination or radius of curvature of the convex surface, while the oppositely-disposed concave surface of the cap similarly forces the packing inward against the rod to better prevent leakage at each surface.

The cap *k* is provided with a coupling member *l*, projecting from the dome thereof and fixedly secured thereto, as by the pin *m*, the tip of the member *l*, which is within the cap *k*, being provided with an internally-threaded recess *n*, adapted to engage with the threaded tip *o* of the operating-rod when the cap is placed upon the upper part of the pen and to be secured thereto by slight twisting movement of the cap.

The tip of the feed-section is internally threaded and adapted to engage with correspondingly externally-threaded portion *p* upon the coupling member *l*, so that when pen *f* is in its retracted position, as in Fig. 2, and the coupling member has been freed from the tip of the propelling-rod through a reverse twisting movement the cap may be placed over the lower end of the barrel and the feed-

ing-section and secured thereto by securing the tip of the coupling member firmly into the internally-threaded portion of the feed-reservoir, thereby effectually closing the ink-reservoir and feed-section against the escape of the contents.

When it is desired to employ the pen for writing, after unscrewing the cap from the mouth of the reservoir, the pen then being held with the mouth upward, the cap is forced over the opposite or upper end of the holder, being turned slightly as the member *l* comes in contact with the tip *o* of the propelling-rod *c* to screw the one to the other. The rod and the member may then be pushed outward from the position shown in Fig. 2 to that shown in Fig. 1 or may be pulled backward to retract the pen, as desired, the cap after final use and retraction of the pen being reversely turned to release the member and the rod and withdrawn from the barrel end, after which it may be used to close the lower or feeding portion of the pen, as described and as shown in Fig. 3. A pin *q* or other suitable stop limits the outward movement of the rod and pen by contact with an interior shoulder within the barrel, while a stop-pin *r* limits the inward or retracted movement of the rod by contact with the washer *h*, the latter being also provided with a slot or recess *s*, within which the pin *r* seats itself in the retracted position of the rod to prevent the turning of the latter when it is desired to screw the coupling-pin on or off from the threaded rod-tip.

While the cap *k* has an easy sliding fit upon the upper barrel end when the pen is closed, it is preferably provided with a close fit in the open position of the pen, as in Fig. 1, in order to add the friction thereof to the friction of the rod passing through the cork packing, thus aiding in giving the rod a firm support to maintain the pen in position under all conditions of use.

It will be obvious that my invention is not limited to the specific details or to the arrangement of parts herein shown for illustrative purposes only, but that the same may be modified and varied within wide limits without departing from the spirit thereof.

I claim—

1. A fountain-pen having an extensible pen, a propelling-rod therefor, a slidable pen-propelling cap adapted to fit over the end of the barrel and there to be secured to the propelling-rod, sliding movement of the cap effecting the extension or retraction of the pen from the holder.

2. A fountain-pen having an extensible pen, a propelling-rod therefor, a packing through which said rod extends, and adjustable means for securing said packing in position.

3. A fountain-pen having an extensible pen, a propelling-rod therefor, a cap adapted to effect the movement of said rod by a longitudi-

nal sliding movement of the cap over the upper end of the penholder, said cap being also adapted to be secured over the opposite end of the holder to form an ink-tight closure therefor.

4. A fountain-pen having a slidable propelling-rod for projecting and retracting the pen, said rod being non-rotatable only in its retracted position.

5. A fountain-pen having a propelling-rod, a coupling member adapted to be screwed thereto and means to secure said rod from rotation for the attachment thereto or detachment therefrom of said coupling member.

6. A fountain-pen having a packed joint and means for varying the degree of compression upon the packing thereof.

7. A fountain-pen having a barrel, a propelling-rod, a packed joint between said rod and barrel, suitable packing therefor, and means for forcing said packing laterally against the rod and also laterally against the inner walls of the barrel.

8. A fountain-pen having a slidable propelling-rod for projecting and retracting the pen, said rod being rotatable in its extended position, and means for preventing the rotation thereof in its retracted position.

9. A fountain-pen having a propelling-rod provided with a member movable therewith, and a stationary member to cooperate with said movable member, said members having abutting surfaces to prevent rotation when said propelling-rod is in its retracted position.

10. A fountain-pen having a barrel, a propelling-rod, a cap, and internally and externally threaded means secured to said cap to permit engagement with said propelling-rod, and also with the feeding end of said pen-barrel.

11. A fountain-pen having a barrel, a cap, a slidable propelling-rod moved thereby, and means to permit securing said cap over the feed end of said barrel.

12. A fountain-pen having a slidable propelling-rod and a single barrel-closure, propelling-rod-actuating member.

13. A fountain-pen having a barrel, a cap, a propelling-rod moved thereby, and means to permit securing said cap over the feed end of said barrel.

14. A fountain-pen having a slidable propelling-rod and removable coupling member to cause projection and retraction of said rod, said coupling member being adapted to serve as a closure for the feed end of the pen-barrel when said rod is retracted.

15. A fountain-pen having a packed joint and an adjustable cap for securing the packing of said joint in position.

16. A fountain-pen having joint-packing means comprising a removable washer and threaded cap and packing secured between said washer and cap.

17. A fountain-pen having a propelling-rod,  
an open-ended barrel within which said rod  
moves, a cap adapted to slide over the open  
end of said barrel, and a coupling member  
5 within said cap and adapted to enter the open  
barrel end to engage with said propelling-rod.

18. A fountain-pen provided with a barrel  
and a pen-propelling rod for projecting and  
retracting the pen, said pen having near its  
10 end a pen-holding metallic sleeve slidable with-

in said barrel and forming a substantially ink-tight joint therein.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY W. STONE.

Witnesses:

HUGO J. STELZNER,  
WM. G. FRAZER.