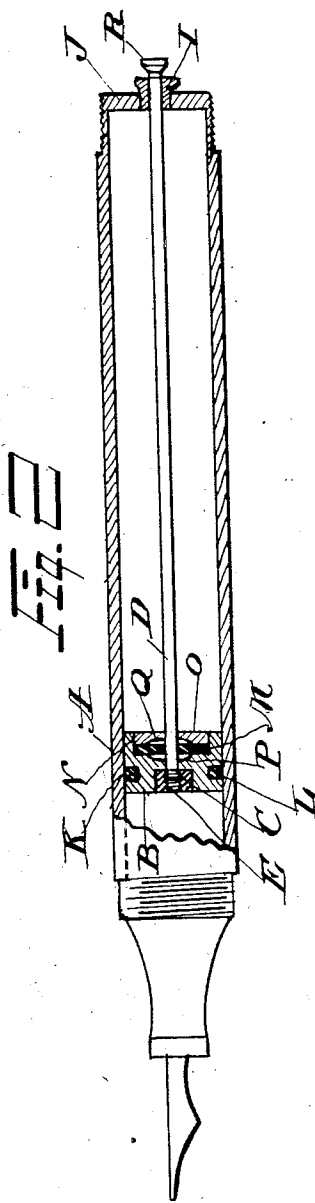
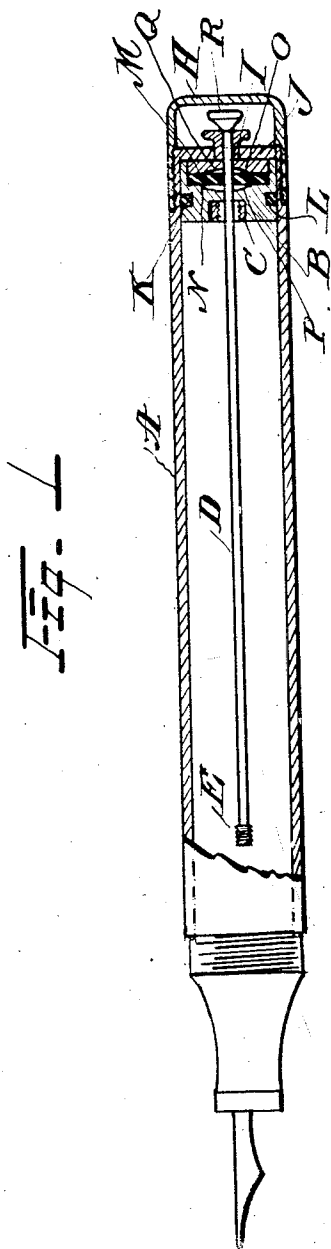


1,409,616.

Patented Mar. 14, 1922.



Inventor  
Luigi Taddeo  
by *Wm. M. McGuire*  
Attorney

# UNITED STATES PATENT OFFICE.

LUIGI TADDEO, OF CLEVELAND, OHIO.

## FOUNTAIN PEN.

1,409,616.

Specification of Letters Patent. Patented Mar. 14, 1922.

Application filed May 13, 1921. Serial No. 469,366.

*To all whom it may concern:*

Be it known that I, LUIGI TADDEO, a citizen of the United States, and resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Fountain Pens, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention pertains to a new and novel construction of fountain pens.

The prime object of the invention is to provide a simple, durable, novel, and efficient construction of fountain pen with means whereby the amount of ink contained in the pen may be materially increased, in connection with concealed means for filling the pen which are easily and readily operated and occupy comparatively little space within the body of the pen.

A further object of the invention is to so construct the pen with detachable means so positioned within its hollow body, after filling, that said means can be readily connected with means for filling the pen when desired.

Another object of the invention is to provide means within the body of the pen for insuring the easy operation of the plunger rod when pushing the same through the plunger, either into or out from the casing.

The foregoing and such other objects as may appear from the ensuing description are accomplished by the construction, arrangement, location and combination of parts hereinafter more fully described, illustrated by the accompanying drawings, and more particularly set forth in the claims appended hereto.

In the accompanying drawings forming a part of this specification, it will be seen that:

Figure 1 is a central longitudinal section of the device embodying my invention, showing the plunger drawn back within the body of the pen to fill the reservoir with ink, and

Fig. 2 is a similar view showing the plunger at the front end portion of the body of the pen ready to be drawn back to fill the reservoir with ink.

Similar characters of reference are employed to designate like parts in the drawings.

In the embodiment of my invention as

illustrated, A indicates the hollow body or casing of the pen, B the plunger reciprocable therein, and provided with a screw-threaded socket C formed within the lower or inner face thereof; D, is the reciprocable plunger rod formed with an enlarged inner terminal end portion E, said end being screw-threaded and adapted to engage with the socket C, so that when said rod is connected to the plunger it can be drawn back and forth within the hollow body or casing.

By reference to Fig. 1, it will be seen that plunger is shown drawn back into the position it is caused to assume after the reservoir has been filled with ink. In this view the rod D has been detached from the plunger B, and pushed back into the reservoir so that a cap H, can be attached to the outer end of the hollow body or casing A, while in Fig. 2, the plunger is shown pushed forward by the plunger rod to the filling position, so that when drawn back it will fill the reservoir with ink.

I indicates a hard substance such as an ivory sleeve or ferrule with a central guide opening formed therethrough to permit the rod D to slide smoothly through the head J of the body or casing.

The body of the plunger is formed of ivory or other hard material unaffected by the action of ink and is so constructed and fitted within the hollow body or casing as to prevent air from entering the reservoir, and to prevent the ink passing therefrom.

A resilient ring or band K, is fitted within a groove L, formed in the periphery of the plunger and adapted to make an air-tight contact with the walls of the reservoir and a resilient washer M, formed of soft rubber encircles the plunger rod and is enclosed within a recess N formed in the upper or outer face of said plunger.

A disk O, of hard material is rigidly secured in contact with the outer face of the soft rubber washer M, and the inner face of the soft rubber washer rests in contact with the upper recessed face of the plunger, the lower face of said disk being provided with a convex recess Q, while the upper face of the plunger is formed with a concave recess P, thereby permitting the washer M to yield as the plunger rod moves back and forth through the plunger and at the same time forming an air tight connection between said soft rubber washer and the plunger rod.

The upper or outer terminal end of the

plunger rod is provided with a knob R, or other suitable means convenient for grasping with the fingers.

5 The enlarged inner terminal of the plunger rod renders it impossible to withdraw said rod outwardly through the plunger or through the head of the hollow body or casing.

10 It will be perceived that the rod D can be readily detached from the plunger and positioned within the hollow body or casing A, after filling, as clearly shown in Fig. 1; that it is quite easy and convenient to turn the rod D so as to thread its terminal threaded end within the socket C, when it is desired  
15 to operate the plunger for filling the pen.

It will also be obvious that the recessed portions P and Q are important for insuring the easy operation of the plunger rod D, 20 when pushing the same through the plunger, either into or out from the casing A, since the fit of the plunger rod in the several washers, is not tight, but just comfortable so that an easy movement of the plunger rod 25 through the soft rubber washer M will be assured, due to the provision of said recesses P and Q which allows for the proper yielding movement of said washer.

30 Having thus described my invention what I claim and desire to secure by Letters Patent is:

35 1. A fountain pen comprising a hollow body, a reciprocable plunger mounted therein formed from a single piece of hard material having a recessed upper face adapted to

retain a soft rubber washer with a screw-threaded socket formed in its lower face and an annular recess formed within its body portion, a resilient packing ring fixedly secured within the said annular recess, a disk 40 of hard material secured within said recessed upper face in contact with the upper face of the soft rubber washer, and a plunger rod formed with an enlarged screw-threaded inner terminal adapted to detachably engage 45 with said socket.

2. A fountain pen comprising a hollow body, a plunger therein formed from a single piece of hard material having a recessed upper end to receive a soft rubber washer 50 with a screw-threaded socket formed within its lower face and an annular recess formed within its body portion, a central concave recess formed in the upper face of the plunger beneath said soft rubber washer, a disk 55 of hard material secured within said recessed upper end of the plunger and formed with a central convex recess in its lower face above the soft rubber washer, and a plunger rod 60 passing through said plunger and provided at its inner end with a screw-thread enlargement adapted to detachably engage with the said socket.

In testimony whereof, I hereunto set my hand this 28<sup>th</sup> day of Mch., 1921.

LUIGI TADDEO.

In presence of—

WM. M. MONROE,  
SOL W. WYMAN.