F. R. BAILEY.

PEN EXTRACTOR.

APPLICATION FILED MAY 7, 1910.

972,146. Patented Oct. 11, 1910.

Fig. 1.

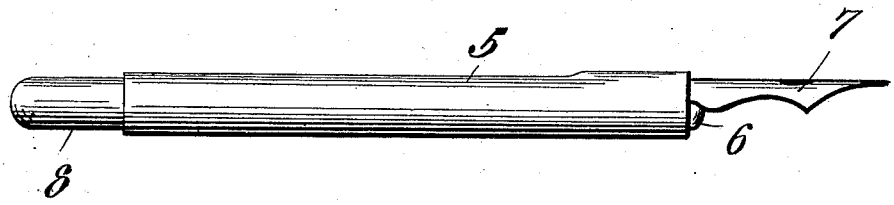


Fig. 2.

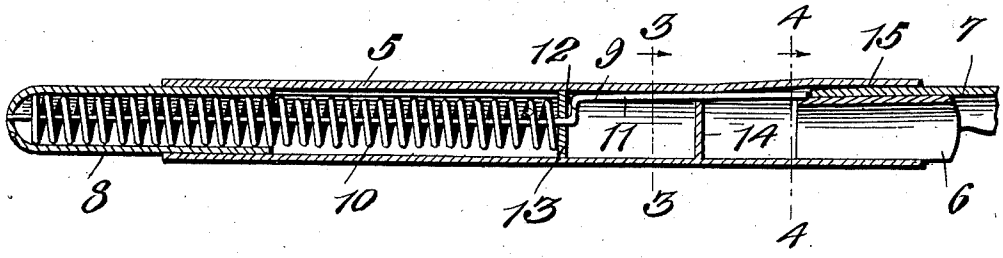


Fig. 4.

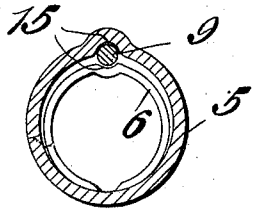
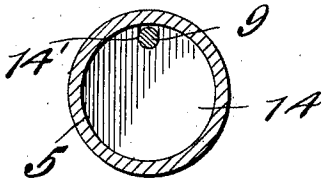


Fig. 3.



Witnesses

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PEN-EXTRACTOR.

972,146. Specification of Letters Patent. Patented Oct. 11, 1910.

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To all whom it may concern:

Be it known that I, FRANK R. BAILEY, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Pen-Extractors, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in pen extractors and has for its object to provide a simple and efficient device of this character whereby the pen point may be readily discharged from the end of the holder when the same has become securely fixed therein by coagulation of the ink or corrosion of the metal.

A further object resides in the provision of a spring held push rod arranged in the cylindrical barrel of the holder, said barrel having a telescoping tube in one end to which said rod is secured and stops arranged in the pen barrel adapted to limit the movement of the push rod therein.

With these and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a pen holder constructed in accordance with the present invention; Fig. 2 is a longitudinal section thereof; Fig. 3 is a section taken on the line 3—3 of Fig. 2; and Fig. 4 is a section taken on the line 4—4 of Fig. 2.

Referring more particularly to the drawings 5 indicates the tubular pen barrel which is open at both ends and has arranged in one end thereof a pen engaging sleeve or ferrule 6. This ferrule 6 is spaced from the walls of the barrel and has its longitudinal edges suitably secured thereto. The pen point 7 is adapted to be received between the inner wall of the barrel and the ferrule 6, said ferrule being sufficiently resilient to prevent the accidental outward movement of the pen point in use. A tubular plunger 8 is positioned in the other end of the barrel and has fixed therein one end of a push rod 9 which is adapted to engage the pen point at its other end to force the same outwardly from the pen barrel. This push rod is normally held in a retracted position by means of a coil spring 10 which is arranged in the barrel 5 and extends into the tubular plunger 8, engaging with the base thereof to which it is secured. The forward end of the push rod 9 is offset, as shown at 11, to form a shoulder 12. This shoulder is adapted to engage with a partition 13 arranged in the barrel 5 to limit the longitudinal movement of the rod 9 in one direction. Between the partition 13 and the base of the tubular plunger 8 the spring 10 extends. A second partition 14 is arranged in the pen barrel in advance of the partition 13 and is provided with a notch or recess 14′ through which the extremity of the push rod 9 is disposed. The engagement of the shoulder 12 with the partition 14 limits the forward movement of the rod 9 in the pen barrel. As shown in Fig. 2, when in its normal position the end of the rod 9 is engaged with the inner end of the pen point 2 and it will be obvious that when pressure is brought to bear upon the end of the plunger tube 8, the spring will be placed under compression as the rod 9 moves longitudinally in the pen barrel. This movement of the rod forces the pen outwardly between the ferrule 6 and the pen barrel 5. The ferrule and the pen barrel are provided with oppositely disposed grooves 15 to receive the push rod 9 as it forces the pen point from the end of the barrel. The engagement of the shoulder 12 with the partition 14 limits this movement of the push rod and upon release of pressure upon the tubular plunger 8, the expansion of the spring 10 in the barrel returns the push rod to its normal position.

From the foregoing it will be seen that I have provided a pen extracting or releasing device which is of very simple and efficient construction and whereby the pen may be removed from the barrel without the necessity of soiling the fingers. The user has only to press upon the end of the plunger tube 8 and the pen point is quickly removed even after it has been in use for a considerable length of time. The corrosion of the metals and the coagulation of the ink in the end of the holder very often so tightly fixes the pen between the ferrule 6 and the holder 5 that it is impossible to extract the same by pulling upon the point with the fingers. The fingers are soiled and the pen point broken by resorting to this method, whereas by the use of my device the point is not destroyed and may be preserved for future

use. The device is very durable, may be quickly operated and can be produced at a low cost.

While I have shown and described the preferred form of my invention, it will be understood that the same is susceptible of numerous minor modifications without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:

A device of the character described comprising a pen barrel, a pen clamping sleeve arranged in one end of said barrel, said sleeve and the pen barrel each having a longitudinal groove therein, said grooves being disposed in opposed relation, a plunger rod longitudinally movable in the barrel, means arranged in said barrel to prevent transverse movement of the rod, one end of said rod being disposed in the opposed grooves of the barrel and clamping sleeve and movable between the same to engage and eject the pen, a tubular plunger telescopically disposed in the other end of the pen barrel, said rod being secured to said plunger, a partition arranged in the barrel, and a spring disposed on said rod between the partition and the plunger to return the rod to its normal position.

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

FRANK R. BAILEY.

Witnesses:

JOHN A. SIPLEY,

RALPH P. BEEBE.