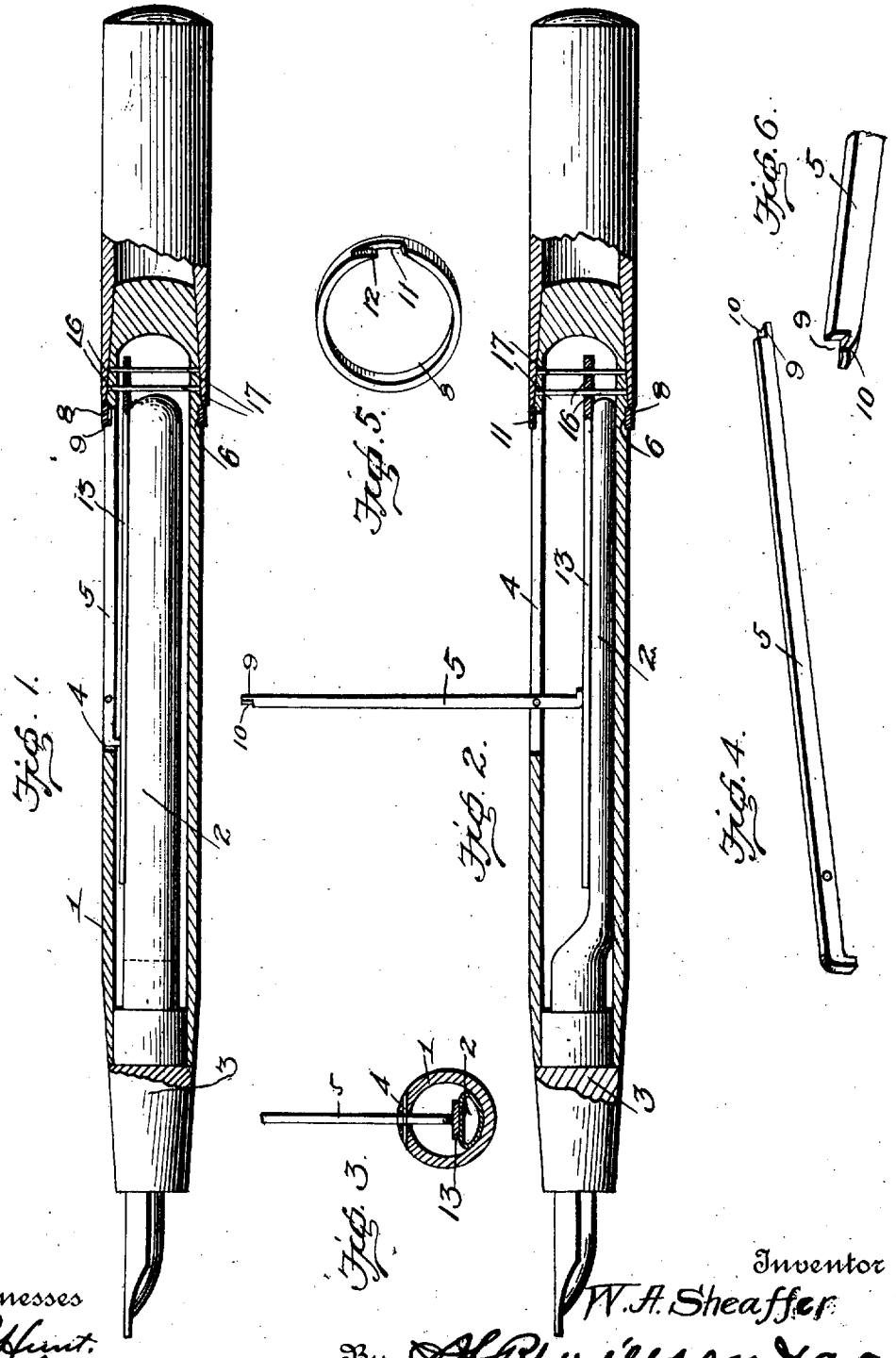
No. 896,861. PATENTED AUG. 25, 1908.

W. A. SHEAFFER.

FOUNTAIN PEN.

APPLICATION FILED MAR. 2, 1908.



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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

No. 896,861. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed March 2, 1908. Serial No. 418,748.

To all whom it may concern:

Be it known that I, WALTER A. SHEAFFER, a citizen of the United States, residing at Fort Madison, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Fountain-Pens; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in fountain pens employing an elastic ink tube or reservoir and compressing means for compressing the tube or reservoir to create a vacuum therein, a suction being established through the pen holder section during the expansion of the elastic tube or reservoir whereby the same will be refilled with ink during the expansion of said tube into its normal position.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:—Figure 1 is a central longitudinal section illustrating the preferred embodiment of the invention; Fig. 2 is a similar view with the ink reservoir or tube compressed by the compressing means; Fig. 3 is a cross section of Fig. 2 taken immediately in front of the operating lever and looking toward the same; Fig. 4 is a detailed perspective view on an enlarged scale of the operating lever, and, Fig. 5 is a similar view of the locking band or ring employed in connection with the invention. Fig. 6 is a detail perspective view of one end of the operating lever on enlarged scale.

Referring more particularly to the drawing the numerals 1, 2 and 3 indicate respectively the outer casing, an elastic ink reservoir, or tube, and the pen holder section of the fountain pen which are of any ordinary or approved construction and therefore need no particular description.

In carrying out the invention the outer casing is formed near its outer end with a longitudinally extending slot 4 between the walls of which and at a point preferably adjacent to the inner end of the same is pivoted an operating lever 5, said lever when in its normal position extending the full length of the slot.

An annular groove 6 is formed in the outer casing at a point adjacent to the free or handle end of the operating lever which projects into the groove of the casing and is reduced as at 9 and one end of such reduced portion bent slightly outward as at 10. The locking band or ring is formed at its inner edge with a suitable peripheral recess 11, one of the end walls as 12 of the recessed portion being beveled inwardly to engage under the reduced end portion of the operating lever when the locking band or ring is turned in a left handed direction in which case the handle end of said lever may be readily grasped by the operator.

By turning the locking band or ring in a right-handed direction sufficiently to bring the recessed portion thereof opposite the reduced handle end portion of the operating lever, said end is permitted to again resume its normal position in the slotted portion of the outer casing in which position it may be securely locked or held by turning the locking band or ring sufficiently.

A compressing member 13, preferably in the form of a flat rectangular metallic plate, is arranged between the ink reservoir or tube and the outer casing, the outer end of the plate being formed with two longitudinally spaced apertures 16 designed to receive corresponding transversely extending guide pins 17 arranged at the outer end of said casing. This plate extends nearly the full length of the reservoir or tube in order that the walls of the same may be compressed to create a vacuum, and upon moving the operating lever into its normal position, the expansive force of the material composing the ink reservoir will cause its walls to assume their normal position and in doing so the ink will be drawn through the pen holder section into the tube.

When the parts are in their normal positions, the longer arm or handle of the lever fits or lies in the slot of the outer casing and extends approximately the full length of the same, and is held securely in position by the locking band or ring 8.

While I have shown and described the preferred embodiment of the invention, it is to be understood that various changes in the form, proportion and minor details of con-

struction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

I claim as my invention:—

1. A device of the character specified embracing an outer casing formed with a longitudinally extending slot, longitudinally spaced guide pins arranged at the outer end of the casing, an elastic ink reservoir arranged within the casing, a compressing plate arranged between the reservoir and casing one end of said plate being formed with longitudinally spaced apertures to receive said guide pins, an operating lever pivotally mounted in the slotted portion of the casing, the free end of the former being designed to engage and move the compressing plate into compressing position when the free end of the lever is swung outwardly and locking means for normally retaining the free end of said lever in inoperative position.

2. A device of the character specified embracing an outer casing formed with a longitudinally extending slot and with an annular or peripheral groove adjacent to one end of its slotted portion, an elastic ink reservoir arranged within the casing, a compressing plate arranged between the reservoir and casing, an operating lever pivotally mounted in the slotted portion of the casing, the pivot end of said lever being designed to engage the compressing plate to move the latter in one direction and the opposite or free end of the lever projecting into said groove, one end of such projecting portion being bent outwardly and a locking ring formed with a circumferential recess in one edge mounted in the groove of said casing, one of the end walls of the recessed portion of said ring being beveled or inclined inwardly to engage under the projecting end portion of the operating lever when turned in one direction.

3. A device of the character specified comprising a casing formed with a longitudinally extending slot, a reservoir arranged within the casing, a compressing plate arranged between the tube and casing, an operating lever for moving the compressing plate into compressing position, pivotally mounted in the slotted portion of the casing, the free end of the lever terminating in an outwardly bent portion, and a locking ring formed with a circumferential recess in one edge mounted upon the casing adjacent to the free end of the lever, one of the end walls of the recessed portion of said ring being beveled inwardly to engage under the outwardly bent portion of the lever.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER A. SHEAFFER.

Witnesses:
LEO ROBERTSON,
H. C. LERCHE.