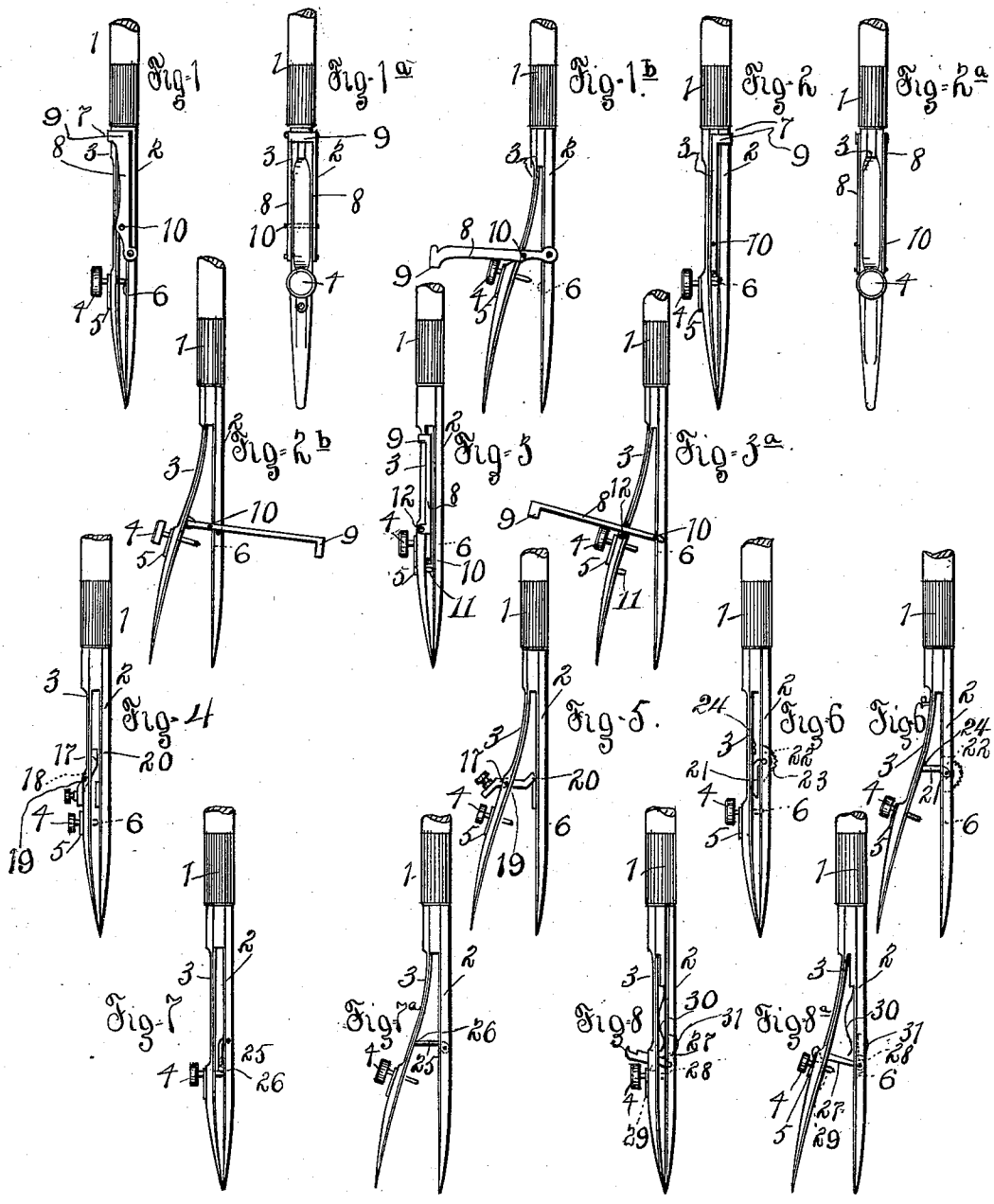
(No Model.)

F. A. ALTENEDER.

DRAWING PEN.

No. 568,556. Patented Sept. 29, 1896.



WITNESSES:

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DRAWING-PEN.

SPECIFICATION forming part of Letters Patent No. 568,556, dated September 29, 1896.

Application filed April 18, 1896. Serial No. 588,198. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND A. ALTENEDER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ruling and Drawing Pens; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to pens, and particularly to that class of pens known as "ruling" or "drawing" pens, wherein two blades, adjustable as to distance from each other, are employed to make inked lines of definite widths, and has for its objects the better accuracy of adjustment of the blades to each other, facility of holding the blades open for purposes of cleansing, inspection, and sharpening, and of reclosing them without change in their adjustment as to distance and width of line, and facility and economy in manufacture by reason of the improved construction.

To attain these several desiderata, this invention consists in a pen having two blades secured to each other at the upper end or formed integrally of the same piece of metal and elastically pressed toward each other at the lower ends or points, an adjusting screw arranged to limit the extent of closure, a cavity in one blade into which the end of the screw enters to insure proper registering of the blades, and means of holding the blades widely apart to give access to their inner surfaces to clean, inspect, and sharpen them.

The construction and operation of this invention are hereinafter fully described and shown in several forms in the accompanying drawings, in which—

Figures 1 and 1^a, respectively, show front and side elevations of a pen in closed position embodying this invention. Fig. 1^b shows the same in opened position. Figs. 2 and 2^a, respectively, show a modified form thereof in front and side elevation in closed position, and Fig. 2^b shows the same in opened position, in which three figures a different form of device for holding the pen open is used. Fig. 3 shows a modified form in side elevation in closed position; and Fig. 3^a, the same in open position, differing in the same respect from those shown in the preceding figures, and also a provision to prevent injury to the pen-points by suddenly closing them. Figs. 4 and 5, Figs. 6 and 6^a, Figs. 7 and 7^a, and Figs. 8 and 8^a show other forms of the parts for holding the blades open.

Referring to the drawings, 1 represents the handle of the pen; 2, the rigid blade thereof; 3, the elastic blade fastened by the upper end or formed integrally with the blade 2. The portion of the blade 3 between the center of its length and the point of union with the blade 2 is made thin and elastic and hardened, tempered, and set so as to constantly press the lower end toward contact with the lower end of the blade 2. The lower ends of the blades 2 and 3 are curved inwardly toward each other and thinned to a feather-edge and beveled on the outer sides, so that when in contact they present to the eye at the points a fine line or point for contact with the paper.

A screw 4 is fitted into a nut 5, formed or fastened in about the center of length of the spring-blade 3, having a conical point which fits in a cavity 6 in the blade 2. When screwed inward, the screw separates the blades 2 and 3 and, entering the cavity 6, serves to register the position of the blade 3 relatively to the blade 2 and, by regulating the distance between the points of the blades 2 and 3, determines the breadth of line drawn by the pen. The nut 5 is preferably made in the well-known form contractible upon the screw 4 to prevent loss of adjustment by accidental turning of the screw 4. As shown in Fig. 1, a looped lever 7, having parallel arms 8, united at the upper end by a bridge or loop 9, is pivotally attached to the blade 2 and is provided with a roller 10, journaled in it and placed between the blades 2 and 3. When raised to the position shown in Fig. 1^b, the arms 8 rest against the head of the screw 4 and the roller 10 engages the blade 3 and holds the blades 2 and 3 apart.

The blade-separating device may be made in several equivalent forms without departing from the principle of this invention, some of which forms are shown in the drawings and described as follows:

In Figs. 2 and 2^a it is shown as a looped

lever 7, pivotally attached to the spring-blade 3, with the bridge or loop 9 on the back of the pen.

In Figs. 3 and 3ª the roller 10 is at the end of the lever-arms 8 and the pivot 12 at an intermediate point in the lever-arms 8, secured to the blade 3, the bridge 9 crossing the front of the upper end of the blade 3, the latter having a stud 11 of such length as to make contact with the blade 2 at the same time that the blade-points come in contact with each other to prevent injury to the points and suddenly closing the blades.

In Figs. 4 and 5 a lever 17, fitted through a slot 18 in the blade 3 and turning on a pivot 19, has an inner end 20, which holds the pen open, as shown in Fig. 5ª.

In Figs. 6 and 6ª a short lever or prop 21, fitted in a slot 22 in the blade 2 and pivoted therein, serves to hold the blades apart. A milled segment 23 on the prop 21 projects through the slot 22, so that the prop 21 can be turned by the finger. A stop 24 is provided on the blade 3, against which the end of the prop 21 rests when the pen is opened.

In Figs. 7 and 7ª a like construction is shown, with this difference: The segment 23 and stop 24 are omitted. The prop 25 rests with its flat end 26 against the inner surface of the blade 3. In this construction the pen is opened by applying the fingers directly to the blades and pulling them apart, holding the pen inverted, so that the prop 25 drops into transverse position between the blades and is closed by holding the pen erect and separating the blades by the fingers, so that the prop 25 falls back to its former position.

In the form shown in Figs. 8 and 8ª a notched latch 27 is pivotally secured in a slot 28 in the blade 2 and projects through a slot 29 on the blade 3. A spring 30, secured to the blade 2, presses in an arm 31 of the latch 27 and causes it to engage in the edge of the slot 29 when the blades are opened. A part of the arm 31 projects through the slot 28, which part being pressed upon liberates the latch 27 and permits the blade 3 to close.

Having described my invention, what I claim is—

1. The combination with a ruling or drawing pen having a fixed blade, and a movable blade, of a lever pivoted to one of the blades to open and hold open the blades by operating the lever, as set forth.

2. The combination with a ruling or drawing pen having a fixed blade, and a movable blade, of a lever pivoted to one of the blades, and a roller upon the lever adapted to open and hold open the blades by operating the lever, as set forth.

3. The combination with a ruling or drawing pen having a fixed blade, and a movable blade, of a looped lever adapted to straddle both blades and pivoted to one of the latter, a roller upon the lever adapted to be operated between the blades by moving the lever, to open and hold open the blades, as set forth.

4. In a pen, the combination with a fixed blade and a movable blade, of a lever pivoted to one of the blades, a roller upon the lever adapted to engage the other blade, and a stop to control the movement of the said movable blade, as set forth.

5. The combination with a drawing-pen, of means for opening the pen-blades and holding them so, comprising a lever formed of two parallel arms pivoted to one of the blades, and connected by a bridge which overlaps the blades; and a roller carried by the said arms between the blades, as set forth.

6. A drawing-pen having a lever pivoted to one blade and bearing upon the other blade for separating the points of the blades and holding them open, as set forth.

7. A drawing-pen having a set-screw and a spring-blade controlled by a lever carrying a roller to open the blades independent of the set-screw, the head of the latter adapted to form a stop for the lever, as set forth.

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