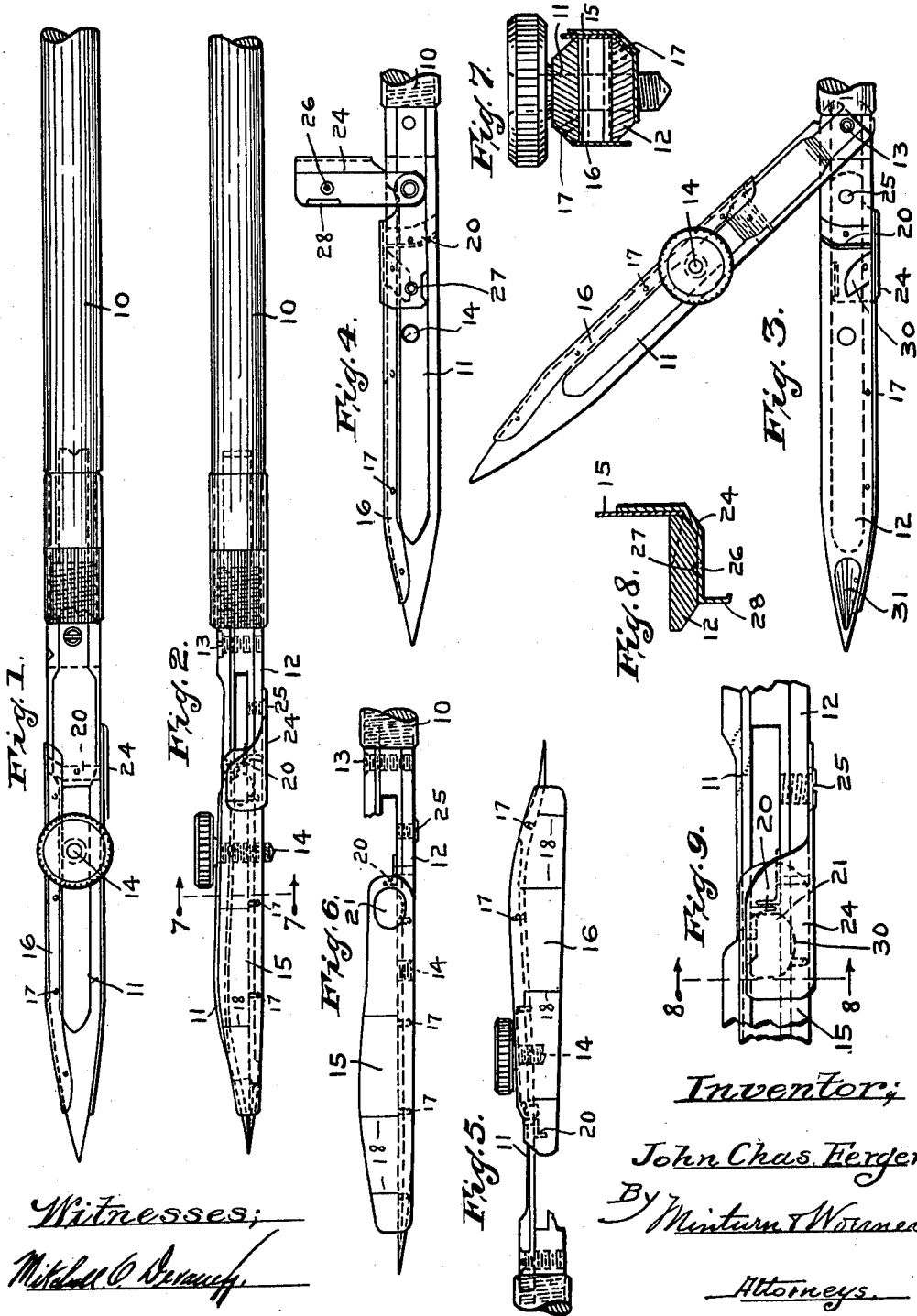


J. C. FERGER.
DRAFTSMAN'S PEN.
APPLICATION FILED JUNE 29, 1911.

1,004,400.

Patented Sept. 26, 1911.



Witnesses;
Michael O. Bernick
L. B. Moerner

Inventor;
John Chas. Ferger,
By Minturn & Worcester
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN CHARLES FERGER, OF INDIANAPOLIS, INDIANA.

DRAFTSMAN'S PEN.

1,004,400.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed June 29, 1911. Serial No. 636,003.

To all whom it may concern:

Be it known that I, JOHN CHARLES FERGER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Draftsmen's Pens, of which the following is a specification.

This invention relates to improvements in pens for drawing straight lines comprising a pair of steel blades which are adjusted with relation to each other to regulate the size of the line, and the object of the invention is to provide an ink magazine or reservoir which will not interfere with the separation of the blades for the purpose of cleaning them, and my object is to improve upon the construction of instruments of the above character in various ways which will be hereinafter fully described and pointed out in the appended claims.

I accomplish the objects of my invention by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a view in side elevation of a pen provided with my improvements, Fig. 2 is a top view of same, Fig. 3 a view in side elevation of the blades of the pen open for cleaning. Fig. 4 is a view of the reverse side of the pen from that shown in Fig. 1, with the clasp open. Fig. 5 is a view of the left side of the pen showing the hinged blade equipped with my improvement, the rigid blade being broken away. Fig. 6 is a view of the rigid blade on the right side of the pen with my invention applied. Fig. 7 is a section on a larger scale on the line 7—7 of Fig. 2. Fig. 8 is a section on a larger scale on the line 8—8 of Fig. 9 and Fig. 9 also on a larger scale shows a portion of both blades as viewed from the right side of the pen and illustrates the clasp closed and shows the ink-filling channel and transverse walls at upper end of ink magazine in dotted lines.

Like characters of reference indicate like parts throughout the several views of the drawing.

While I have shown my invention as applied to a pen for making straight lines, it is equally adapted to compass pens for drawing circles without the exercise of invention and I will therefore describe it as a straight line pen.

Referring to the drawings, 10 is a handle

of any usual and suitable material to which a shank carrying the blades of the pen is fastened, preferably by being screwed therein in the manner shown in the drawing. There are two blades 11 and 12, of which I designate the blade 11 as the top and blade 12 the bottom one. The top blade 11 is pivotally secured by a screw 13 to a thickened inner end of blade 12, to permit the blade 11 to be swung to one side for easy cleaning of the inner faces of the blades. The distance between the blades is regulated by a screw 14 in the usual way. Both of the blades near their points are brought closer together than is usual in such instruments to more fully prevent the escape of ink at that end when the pen, filled with ink, is closed.

The usual openings at each side of the pen between the two blades are closed by angle-plates 15 and 16, preferably of metal. One member of each angle-plate is secured to the beveled edge of its respective blade by any suitable means, here shown as by rivets 17, but the plates may be secured by soldering, or they may be formed as integral extensions of the blades. The other members of said angle-plates extend across the space between the two blades and overlap the edge of the opposite blade making a close sliding fit against it without being fastened to it. These plates extend preferably from near the point or drawing end of the pen to approximately midway between the screw 14 and the adjacent end of the handle 10, although this may be varied from. Slits 18 are formed in the plates 15 and 16 to permit the blades of the pen to adjust their shapes when moved toward or from each other by the set-screw 14 in opening and closing the pen. These slits will preferably extend diagonally of the sides of the plates to cause the edges of the slits to overlap. The space thus inclosed on four sides by the blades of the pen and the attached angle-plates comprises a chamber to receive a supply of ink for the pen, the inner end of which chamber or end next to the handle will be closed by a pair of flanges 20, one for each blade, secured to the inner face of the blade and projecting inwardly and the two flanges overlapping.

An opening 21 is formed through plate 15 through which ink will be introduced into the above described reservoir, and when not

open for filling, this hole will be closed by a clasp-plate 24 having a member at an angle therewith which is hinged at 25 to blade 12. The clasp is of spring metal and has a locking detent 26 which springs into indent 27 when the clasp is closed, to hold it in that position. A finger-hold 28 on the clasp enables it to be drawn out and unlocked. To facilitate the introduction of the ink which may be by means of an instrument similar to the well known medicine dropper, the wall of blade 12 will be channeled as shown at 30, to admit the nozzle of the dropper. The inner face of the lower blade has a groove 31 to insure a better flow of ink to the point of the pen.

A pen as above constructed may be filled with ink in sufficient quantity to enable the operator to perform many more times the amount of work without refilling, than he could otherwise do, and the ink is protected against evaporation and outside dust and dirt. The accumulation of any foreign substance at the point may be easily removed by opening the pen slightly and passing a pin or tooth pick between the points of the blades and by screwing the set-screw out the top blade may be swung to the left which will make all parts of the pen accessible for cleaning.

Having thus fully described my invention, what I claim as new and wish to secure by Letters Patent of the United States, is—

1. In a drawing instrument, a pair of blades, means for adjusting the distance between the blades, and a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades and contacting with the other blade, the two plates being attached to different blades.

2. In a drawing instrument, a pair of blades, means for adjusting the distance between the blades, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades and contacting with the other blade, the two plates being attached to different blades, and means at the upper ends of the plates for closing the space bounded by said blades and plates.

3. In a drawing instrument, a pair of blades, means for adjusting the distance between the blades, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades and contacting with the other blade, the two plates being attached to different blades, and partitions at

the upper ends of the plates carried by said blades for closing the space bounded by said blades and plates.

4. In a drawing instrument, a pair of blades, means for adjusting the distance between the blades, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades and contacting with the other blade, the two plates being attached to different blades, partitions at the upper ends of the plates carried by said blades for closing the space bounded by said blades and plates, and one of said plates having an opening through which the pen is supplied with ink and means for closing the opening.

5. In a drawing instrument, a pair of blades, adapted to contact with each other at their points and back an appreciable distance therefrom and having a channel in a contacting face of a blade to aid the flow of ink to the point, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades to and against an edge of the other blade.

6. In a drawing instrument, a pair of blades, adapted to contact with each other at their points and back an appreciable distance therefrom and having a channel in a contacting face of a blade to aid the flow of ink to the point, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades to and against an edge of the other blade, said plates having transverse slits to afford freedom of adjustment of the blades to which they are attached.

7. In a drawing instrument, a pair of blades, adapted to contact with each other at their points and back an appreciable distance therefrom and having a channel in a contacting face of a blade to aid the flow of ink to the point, a pair of plates extending longitudinally of the blades between which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades to and against an edge of the other blade, said plates having transverse slits to afford freedom of adjustment of the blades to which they are attached, each of said blades having inwardly extending flanges which pass each other and form a partition.

8. In a drawing instrument, a pair of blades, adapted to contact with each other

at their points, and back an appreciable distance therefrom and having a channel in a contacting face of a blade to aid the flow of ink to the point, a pair of plates extending longitudinally of the blades between
5 which the blades are located one longitudinal edge of a plate being attached to one of the blades said plate extending thence across the opening between the blades to
10 and against an edge of the other blade, said plates having transverse slits to afford freedom of adjustment of the blades to which they are attached, each of said blades having inwardly extending flanges which pass

each other and form a partition, one of said plates having an opening through which ink is supplied to the pen, the adjacent blade being recessed opposite the opening and a pivoted closure for the opening.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this 24th day of June, A. D. one thousand nine hundred and eleven.

JOHN CHARLES FERGER. [L. S.]

Witnesses:

JOSEPH A. MINTURN,
F. W. WOERNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."