(No Model.)

E. DICKEY.

FORCE FEED RULING PEN.

No. 490,340. Patented Jan. 24, 1893.

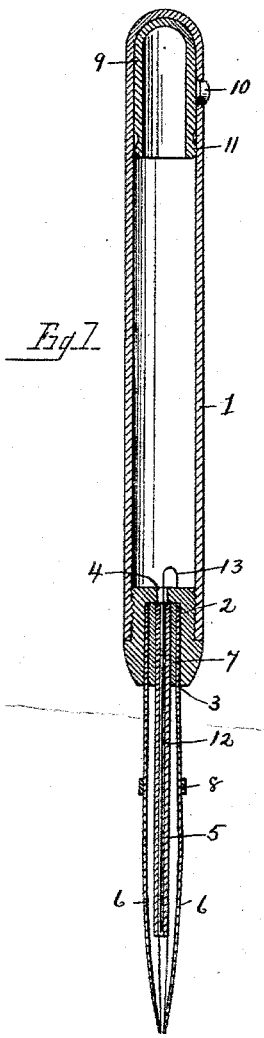

Fig. 1.

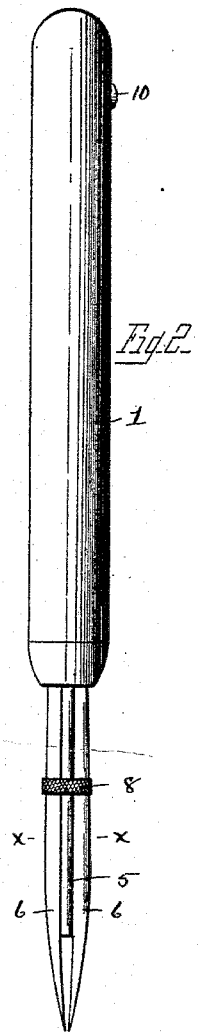

Fig. 2.

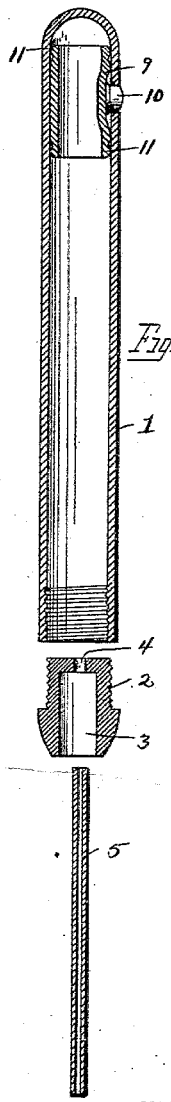

Fig. 3.

Fig. 4.

WITNESSES

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FORCE-FEED RULING-PEN.

SPECIFICATION forming part of Letters Patent No. 490,340, dated January 24, 1893.

Application filed June 4, 1892. Serial No. 435,492. (No model.)

To all whom it may concern:

Be it known that I, EDMUND DICKEY, of Fremont, county of Sandusky, and State of Ohio, have invented certain new and useful Improvements in a Force-Feed Ruling-Pen; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form part of this specification.

My invention relates to a force feed ruling pen of that character used in mechanical drawing, ruling in book keeping &c., and has for its object to construct a pen of this character of few parts, with a positive force feed and of inexpensive construction.

With these objects in view the invention consists broadly in a ruling pen comprising a cylindrical body portion provided with a plug at one end into which is secured the two blades of pen, and a conduit for the ink, and at the opposite end with a cylindrical compressor for forcing the ink between the points of the two pen blades.

In the drawings:—Figure 1 is a longitudinal vertical sectional view of a pen constructed in accordance with my invention, the compressor being closed at the upper end. Fig. 2 is an elevation of a complete pen. Fig. 3 is a longitudinal vertical section of the pen showing the compressor open at both ends. Fig. 4 is a transverse view on lines *x*—*x* Fig. 2.

1 designates the cylindrical body portion of the ruling pen, screw threaded at one end into which is inserted a screw threaded plug 2 formed with an annular recess 3 and a perforation 4 extending through the recess to communicate with the cylindrical bore of the body portion, there being a pipe 5 secured in the recess in communication with the perforation.

6 designates the blades of the ruling pen arranged in the recess 3, at diametrically opposite sides, and secured therein by an annular wedge 7 which passes between pipe 5 and the blades, the points of the blades being held in proper position relatively by means of an encircling movable band 8.

Within the bore of the body portion 1 at the extreme upper end thereof is secured a cylindrical compressor 9 either closed at the upper end as shown in Fig. 1, or open as shown in Fig. 3, and provided with a projection 10 which extends through a perforation formed in the shell of the body portion. At the lower end of the compressor there is formed an annular enlargement 11, to fit closely within the bore, and prevent the ink from passing between the same and the shell, the annular enlargement being formed upon both sides when each end is open.

In order to provide for an absolutely even and regular feed, I insert a wire 12 in the bore of the pipe, and suspend the same therein by simply bending the ends as at 13.

From the foregoing description it will be seen, that I have provided an effective ruling pen of but few parts and in which the central feed flows to each blade of the pen evenly. It will also be seen that I provide a receptacle for the ink of the full capacity of the bore of the body portion as there are no internal parts located therein to occupy the space or obstruct the flow of ink. It will also be seen that in locating the projections 10 and compressor at the extreme top of the body portion all liability of pressing the same in the act of drawing or ruling is avoided, it being entirely out of the way when the pen is in use.

In using the pen plug 2 is removed and the bore of the body portion is filled or nearly filled with ink, the screw plug is inserted, and by pressing upon the projection 10 is pressed, causing a portion of the compressor to indent, thereby causing atmospheric air pressure upon the ink resulting in the displacement of a sufficient quantity to form a globule at the end of the pipe, which expands until it contacts with the blades of the pen and then separates and flows upon the same.

What I claim is:—

1. In a drawing pen, the combination with a tubular body open at one end, of the screw plug having a central recess and perforation, the conducting pipe, the opposing blades the wedge between the blades and pipe, the encircling band for holding the blades.

2. In a drawing pen, the combination with the tubular body portion carrying the pen at one end and having a perforation near its

upper end, a cylindrical compressor within the body portion, a projection thereon projecting through the body, and an annular enlargement at the end of the compressor adapted to bear upon the inner surface of the tubular body portion and prevent the escape of ink.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

EDMUND DICKEY.

Witnesses:
F. M. TUNINGTON,
A. J. BLUM.