

(No Model.)

F. W. LEPPER.
DRAWING PEN.

No. 546,850.

Patented Sept. 24, 1895.

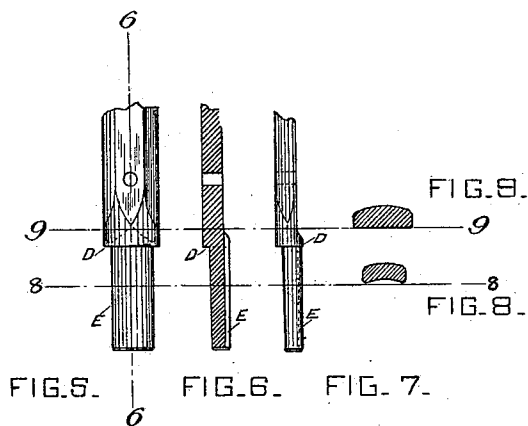
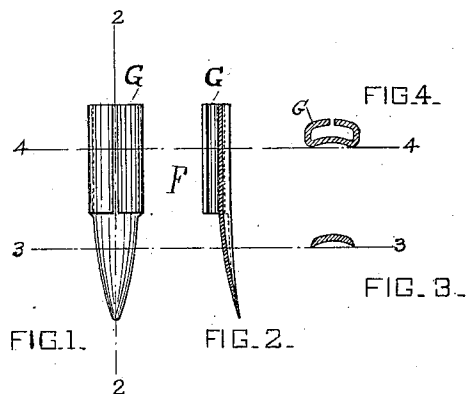
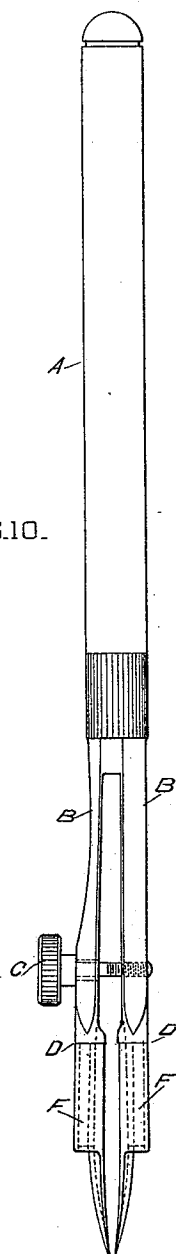


FIG. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE,

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DRAWING-PEN.

SPECIFICATION forming part of Letters Patent No. 516,850, dated September 24, 1895.

Application filed April 10, 1895. Serial No. 545,212. (No model.)

To all whom it may concern:

Be it known that I, FRED W. LEPPER, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Drawing-Pens, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to drawing or ruling pens for draftmen's use.

The object of the invention is to produce a drawing-pen point applicable to the adjustable handle or body of a drawing-pen, trammel, circle-pen, or the like.

Figure 1 is a view of the back of the pen-point. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Figs. 1 and 2; and Fig. 4, a section on lines 4 4, Figs. 1 and 2. Fig. 5 is a side view of the lower end of one of the legs of the drawing pen. Fig. 6 is a section on line 6 6. Fig. 7 is a view at right angles to Fig. 5, and Fig. 8 a section on line 8 8. Fig. 9 is a section on line 9 9. Fig. 10 is a side elevation of "straight-line pen."

In a drawing-pen the handle A is of usual construction, and the spring-legs B B are connected to said handle in usual manner and are adjusted toward and from each other in the usual way by a screw C. The upper part of the pen illustrated is the common Altered pen; but any other common make may be readily adapted to this invention, or the point may be used on other instruments for ruling, as usual with a draftsman's pen. The lower ends of legs B B preferably have shoulders D, and the tenons E, below these shoulders, are preferably slightly tapering. These tenons are by choice of the concavo-convex form shown in Fig. 8, although this is not absolutely necessary.

The pen handle and legs may be of any material usual for such purposes. The handle is usually bone and the legs steel.

The removable pen-point F is preferably of steel, so that it may be brought to a definite edge or end, although other hard metals may be used. The lower part of the pen-point is preferably of the concavo-convex form indicated at Fig. 3. Above this the edges of the point are turned outward and then toward each other, so as to form the spring-socket G, which will fit snugly upon

the tenon E of one of the pen-legs. The form shown at Fig. 3 is not essential, as each draftsman has his own ideas, and the pen-point can be ground by the draftsman to suit his own ideas. The spring-socket G should taper slightly, so as to fit on the tenons of the lower part of the legs and hold the pen-points thereon. If desirable, the pen-points F can be applied to old drafting-pens now in use, the legs of the pens entering sockets G of the pen-points. By this construction pen-points are made easily removable for repair or substitution. The pen-points may be easily kept in order, and as the points are interchangeable the same handle may be used with several different kinds of pen-points. Old pen-points may be removed singly and new ones supplied, and the expense will be largely reduced and efficiency increased, as when the pen-points become rusty or worn a new point may be substituted and the handle and legs will wear indefinitely. The spring-socket of the pen-point can be compressed or expanded slightly, although a snug fit is desirable.

Of course I am aware of the fact that writing-pens are usually made removable from their holders, and I am also aware that some forms or parts of marking or ruling pens are made removable from their handles. My invention does not go to the broad idea of a pen removable from its handle, but relates rather to the construction of draftsmen's pens in which the ink is contained between two points or nibs, which are relatively adjustable, so that a light or heavy line may be made by adjusting the nibs and drawing them sidewise along the paper, and my invention involves the idea that each of the pen-points shall have a single nib and shall be removable from the leg of the handle. Preferably the points may be fitted to either leg; but I may make them right and left for certain purposes.

What I claim is—

1. A drawing pen having a handle and legs provided with tenons, and removable pen points having spring sockets embracing said tenons, substantially as described.

2. The combination with the leg of a drawing pen having a tapered tenon thereon and a shoulder above the same, of a removable pen point having a tapering socket integral

with the body and adapted to grasp the tenon, substantially as described.

3. A pen point having a single nib, and provided with a socket above the point into which
5 the leg of a drawing pen handle enters snugly, substantially as described.

4. A removable pen point for drawing pens having a single nib and means for attaching

the same to the leg of a pen holder, substantially as described.

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

FRED W. LEPPER.

Witnesses:

CHAS. S. DU BOIS,

W. A. BARTLETT.