

No. 639,845.

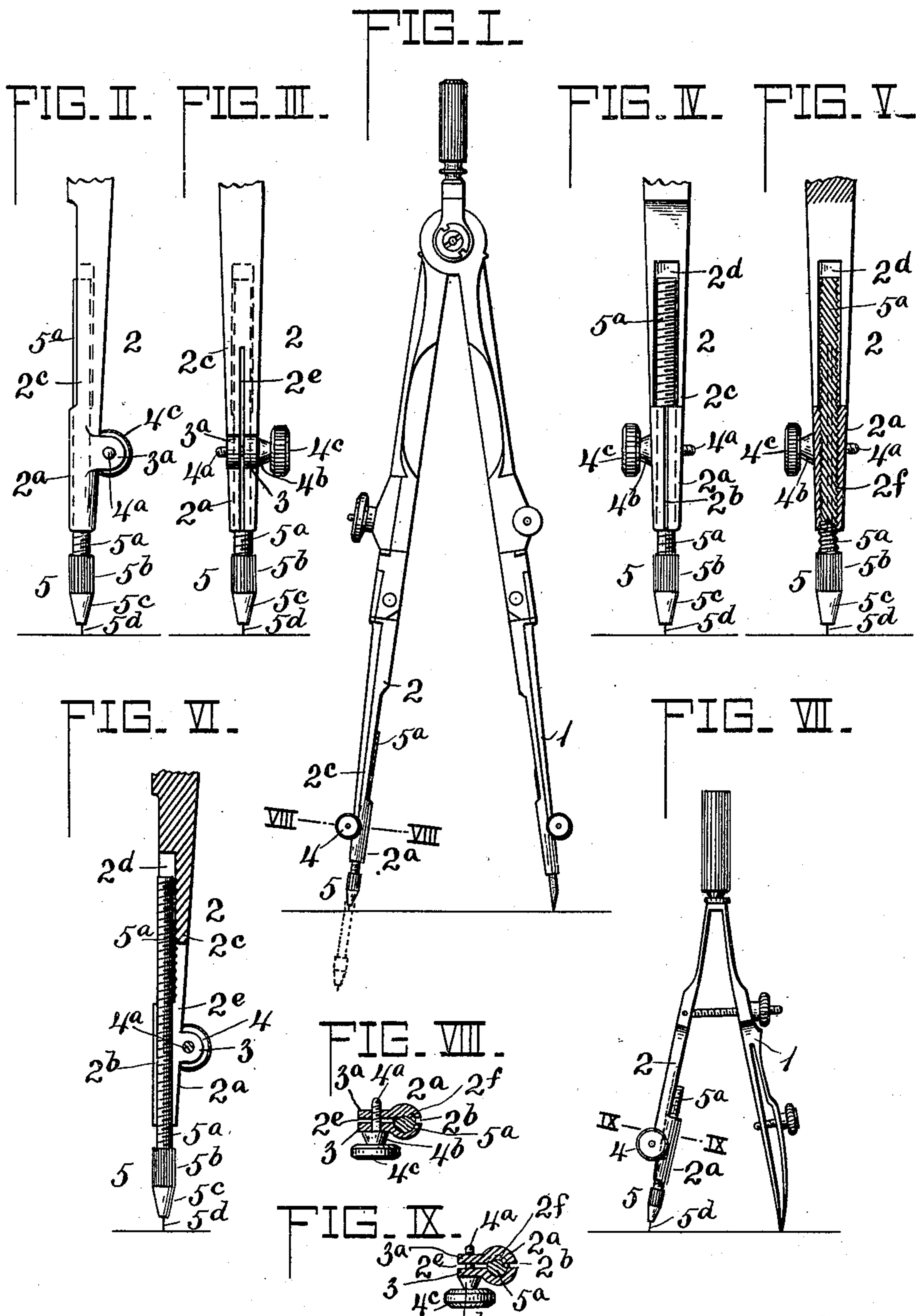
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P. M. CHAMBERLAIN.

ADJUSTABLE NEEDLE POINT FOR DRAFTING INSTRUMENTS.

(Application filed Feb. 26, 1897.)

(No Model.)



Witnesses
W. E. Allen.
W. Allen.

Inventor
Paul Mellen Chamberlain
By *Hervey Knight*
Attorney

UNITED STATES PATENT OFFICE.

PAUL MELLEN CHAMBERLAIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE
EUGENE DIETZGEN COMPANY, OF ILLINOIS.

ADJUSTABLE NEEDLE-POINT FOR DRAFTING INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 639,845, dated December 26, 1899.

Application filed February 26, 1897. Serial No. 625,223. (No model.)

To all whom it may concern:

Be it known that I, PAUL MELLEN CHAMBERLAIN, a citizen of the United States, and a resident of Chicago, in the county of Cook
5 and State of Illinois, have invented certain new and useful Improvements in Drafting-Compasses, of which the following is a specification.

My invention relates to those instruments,
10 usually known as "drafting-compasses," having a clamping-leg and a needle which can be moved longitudinally of the clamping-leg at will to suit the varying lengths of the other leg or the angles at which the latter may be
15 placed and which can be rigidly fastened to hold said adjustment.

My improvement consists in novel features of construction hereinafter described and claimed.

20 In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a front elevation of a drafting-
25 compass, showing my invention applied thereto, the adjustability of the needle being indicated in dotted lines. Fig. II is a back view of the clamping-leg and needle. Fig. III is a view of the left side thereof. Fig. IV is a view
30 of the right side of the same. Fig. V is a longitudinal section from front to back. Fig. VI is a longitudinal section from right to left. Fig. VII is a front elevation of a bow-pen, showing my invention applied thereto. Fig.
35 VIII is a transverse section on the line VIII VIII of Fig. I. Fig. IX is a transverse section on the line IX IX of Fig. VII.

1 represents the pencil or pen carrying leg in all respects as at present in use.

40 2 represents the divided needle holding and clamping leg provided with my invention. This clamping-leg is of tubular form at its lower part, providing a sheath 2^a, having a longitudinal slit 2^b at the right side. The
45 middle part 2^c of the clamping-leg, at the right side, is formed with a longitudinal deep groove 2^d of U shape in transverse section on its right side.

2^e is a longitudinal slit at the left side, extending into the grooved middle part of the
50 leg. The tubular part has an internal screw-

thread 2^f, as shown clearly in Fig. V. The sides of the slit, at the left side, are provided with ears 3 3^a, extended outwardly, one of which ears 3^a is internally perforated and
55 threaded to receive the screw-threaded stem 4^a of a clamping-screw 4, and the other, 3, of which ears has a smooth perforation and provides a bearing for the shoulder 4^b on the inner side of the head 4^c of the clamp-screw 4. 60

5 is a needle having a long screw-threaded shank 5^a, extending entirely through the tubular part and filling and occupying the longitudinal groove 2^d when in normal position. The needle is also formed with a milled or
65 knurled collar 5^b, a point 5^c, and a pivot-pin 5^d.

In Fig. VII, I show my invention applied to a bow-pen.

The long screw-threaded shank of the needle is held rigidly to its work whatever the position of the shank within the tubular screw-threaded and slitted part, and by means of the ears and clamping-screw the needle is fixed within the tubular part in any position to which it may be adjusted. The clamping
75 means is also adapted to take up wear between the needle and its sheath.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent: 80

A drafting-compass comprising a needle holding and clamping leg, constructed with an internally-screw-threaded tubular lower part providing a sheath having a longitudinal slit at its right side, with a middle part having a
85 longitudinal deep groove in its right side of U shape in cross-section, with a longitudinal slit at its left side extending through the tubular part and into the middle part, and with ears on the left side of the tubular part having a
90 clamp-screw working through the ears, and a needle having a milled collar and a long screw-threaded shank extending entirely through the tubular lower part and filling and occupying the longitudinal deep groove when in
95 normal position to provide a rigid extended fine adjustment for the needle; substantially as described.

PAUL MELLEN CHAMBERLAIN.

Witnesses:

CLARENCE E. DE PUY,
F. A. ROGERS.