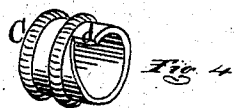
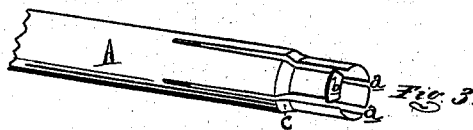
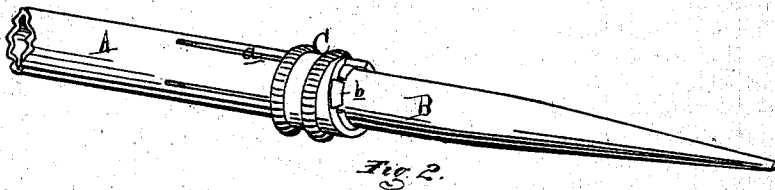
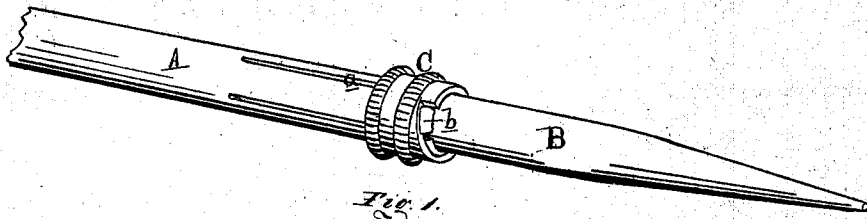


G. C. MILLER.  
Extension Dividers.

No. 144,468.

Patented Nov. 11, 1873.



ATTEST.  
*N. J. Sprague*  
*C. F. Elerts*

INVENTOR.  
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*per Attorney*  
*N. J. Sprague*

# UNITED STATES PATENT OFFICE.

GEORGE C. MILLER, OF DETROIT, MICHIGAN, ASSIGNOR TO JAMES C. MALOY,  
OF OIL CITY, PENNSYLVANIA.

## IMPROVEMENT IN EXTENSION-DIVIDERS.

Specification forming part of Letters Patent No. **144,468**, dated November 11, 1873; application filed  
June 3, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE C. MILLER, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Extension-Dividers; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective view of my improved extension-divider leg, not compressed, so that the point may be withdrawn. Fig. 2 is a perspective view, showing the cam-ring turned to compress the point in the end of the leg. Fig. 3 is a perspective view of the leg. Fig. 4 is a similar view of the cam-ring.

Like letters refer to like parts in the several figures.

The nature of the invention relates to an improvement in that class of dividers which have one or both legs tubular, for the reception of an extensible or reversible point, and has for its object to provide a simple and effective means for fastening the point in the leg; and to this end it consists in longitudinally slotting the end of the leg-tube, so that the tongues may be compressed by a cam-ring acting upon the tapered ends thereof to secure the point, in the manner more fully hereinafter set forth.

In the drawing, A represents the tubular leg of my divider, its bore being of such diameter as to receive the point B. The outer part of the tube has four longitudinal slits, *a*, sawed or cut in it, making four elastic tongues, on one

of which is formed an outward-projecting flange, *b*, whose inner edge is obliquely or diagonally cut to form a segment of a spiral. A portion of the leg next the end is reduced in diameter, and is connected with the larger diameter by the cone *c*. C is a ring, having a cam, *d*, on its lower or outer end, placed on the lower end of the leg, abutting against the flange *b*. When the deepest part of the cam *d* lies against the flange *b*, the ring embraces only the reduced diameter of the leg, whose tongues are not then compressed inwardly; but, when partially rotated, the action of the cam on the flange *b* is such as to force the ring up the leg onto the cone *c*, thereby compressing the tongues upon the point. A reverse movement of the ring releases the point from the pressure of said tongues.

The ring takes up but little space, does not interfere with the functions of the instrument, and cannot readily be detached and lost, while it holds the point with great firmness and power, and is in every way superior to the set-screws and screw-clamps heretofore used for securing the point to the leg.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the slotted tubular leg A, provided with the flange *b* and cone *c*, of the cam-ring C, substantially as and for the purpose set forth.

GEO. C. MILLER.

Witnesses:

H. F. EBERTS,  
CHAS. E. HUESTIS.