(No Model.)

F. MILLER.

DRAWING INSTRUMENT, CALIPERS, &c.

No. 371,469. Patented Oct. 11, 1887.

Fig. 1.

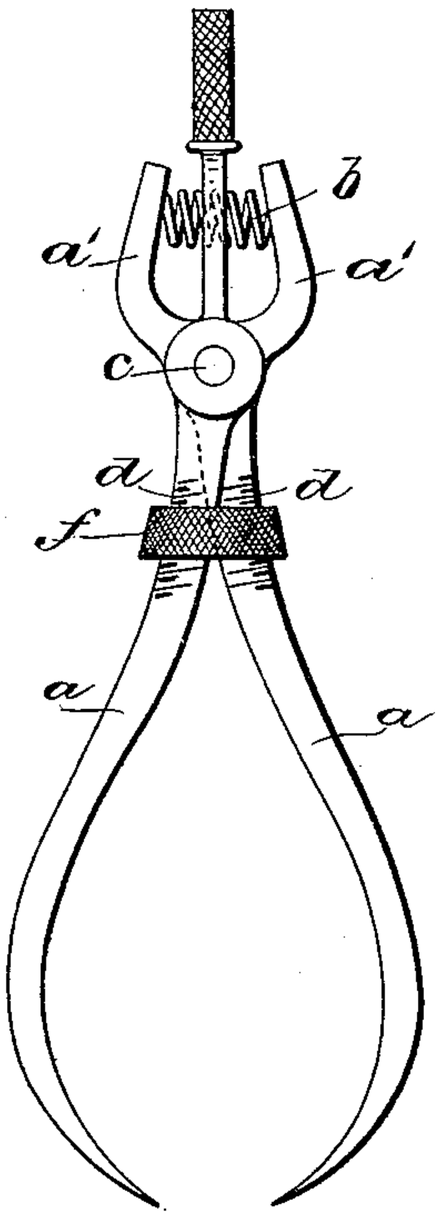


Fig. 3.

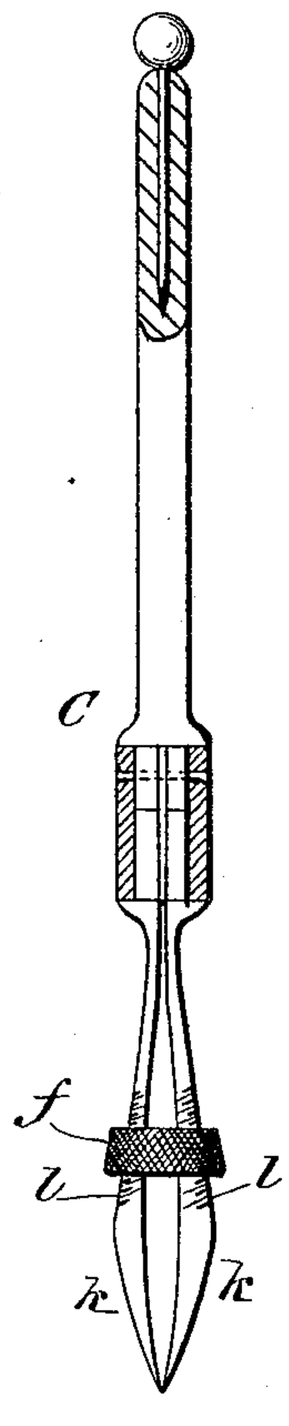
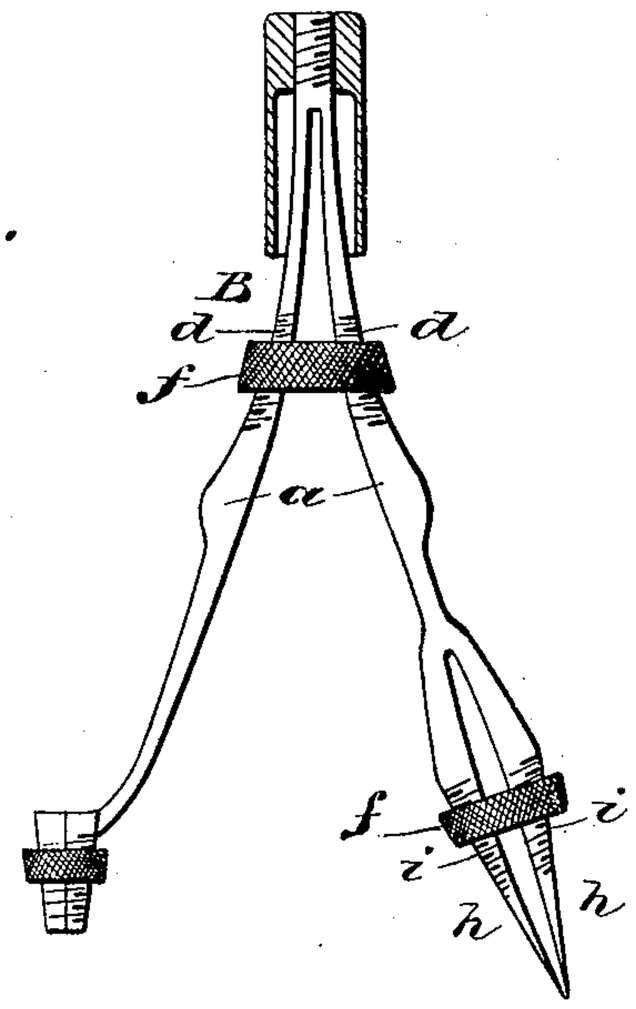


Fig. 2.



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DRAWING-INSTRUMENT, CALIPERS, &c.

SPECIFICATION forming part of Letters Patent No. 371,469, dated October 11, 1887.

Application filed June 11, 1887. Serial No. 241,018. (No model.)

To all whom it may concern:

Be it known that I, FRANK MILLER, of the city, county, and State of New York, have invented a new and useful Improvement in Drawing-Instruments, Calipers, &c., of which the following is a full, clear, and exact description.

My invention relates to drawing-pens, calipers, and other instruments formed with jaws or members to be opened and closed; and the object of the invention is to provide for a very rapid and also a very slow and delicate adjustment of the jaws or members to and from each other.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a pair of calipers made in accordance with my invention. Fig. 2 is a similar view of a spring bow or circle pen made in accordance with my invention, and Fig. 3 is a side view of a common drawing-pen having my invention applied thereto.

a a represent the cross pivoted jaws or arms of a pair of calipers which are normally held apart by the spring *b*, placed between the upper ends, *a' a'*, of the said jaws or arms. Upon the arms or jaws *a a*, just below the pivot *c*, is placed the screw-collar *f*, which is annular in form, screw-threaded upon the inside, and slightly conical to conform to the slant of the outside edges of the jaws or members *a a*. The outer surfaces of the jaws *a a* are screw-threaded, as shown at *d d*, so that the screw-threads of the collar *f* will engage with the threads *d*, and thus by turning the collar *f* furnish very delicate means for adjusting the jaws of the instrument. In use the jaws *a a* will be pressed with the hand nearly to the proper adjustment. The collar *f* will then drop down to hold the jaws and will engage with the screw-threads *d*, so that by turning the collar the jaws may be closed or permitted to expand. The bows *a a* of the drawing-pen B are constructed and operated upon the same plan, and also the nibs *h h* of the pen proper, the same being screw-threaded at the outer surface, as shown at *i i*, and provided with a screw-threaded nut or collar, *f*. The spring-jaws *k k* of the plain drawing-pen C are also screw-threaded at their outer surfaces, as shown at *l l*, to receive the screw-threaded collar or nut *f*. By squeezing the nibs *h h* together with the fingers the collar may be raised or lowered, furnishing, as in the other instruments, a rapid adjustment; then by turning the collar the nibs may be very delicately adjusted.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

As an improvement in calipers, drawing-pens, &c., the arms or jaws thereof extended to form the working points of the instrument and screw-threaded on opposite converging surfaces, in combination with an internally screw-threaded nut, *f*, substantially as and for the purposes set forth.

FRANK MILLER.

Witnesses:
JOHN H. KITCHEN,
JOHN B. PINE.