(No Model.)

E. S. FIELD.

SPRING CALIPERS.

No. 332,244. Patented Dec. 15, 1885.

Fig. 1.

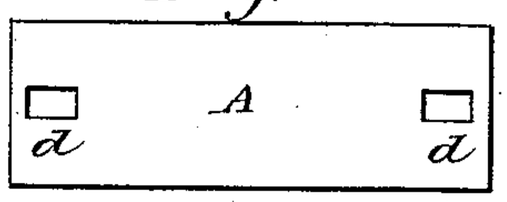
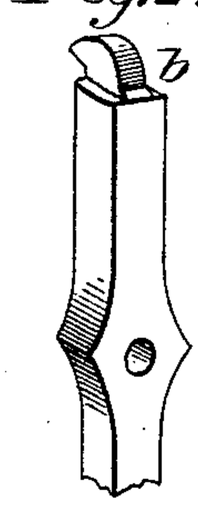


Fig. 2.



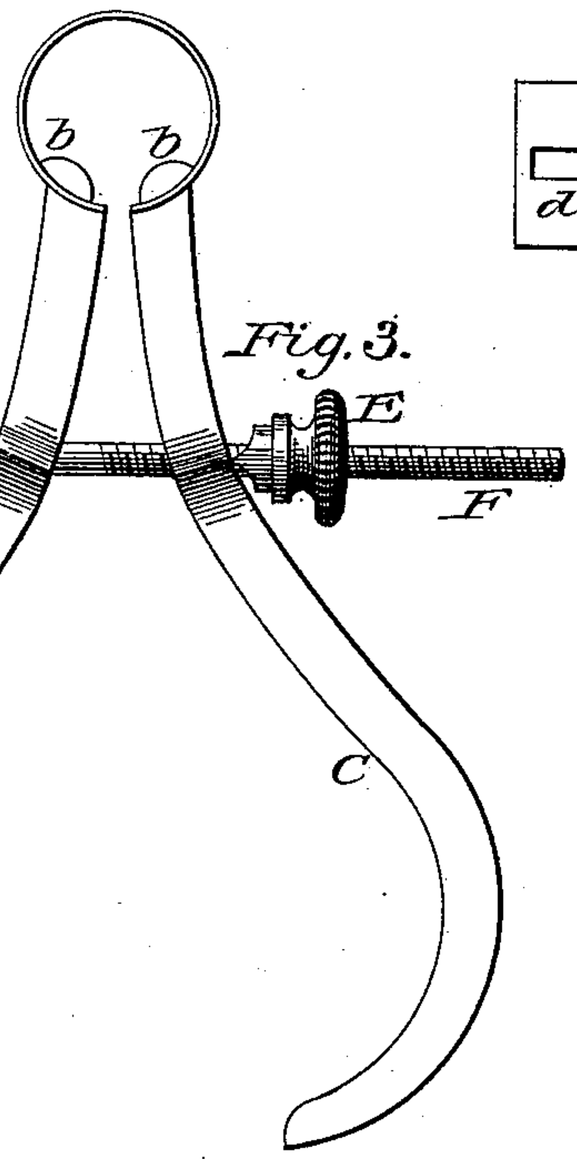


Fig. 3.

Fig. 4.

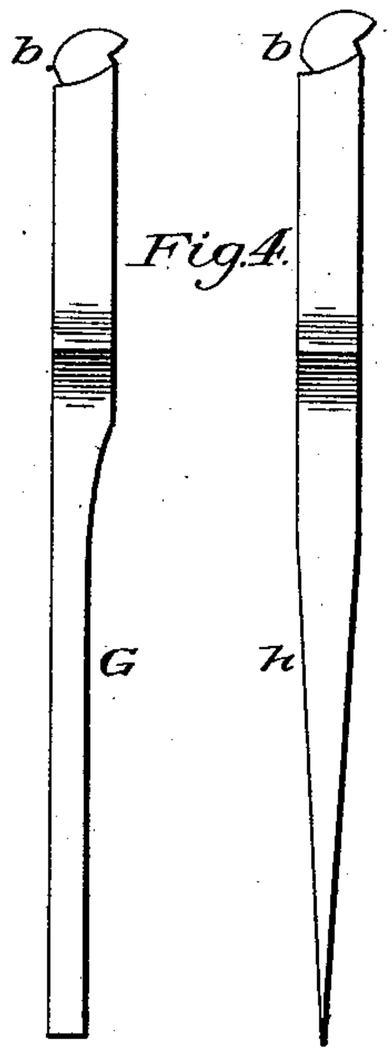
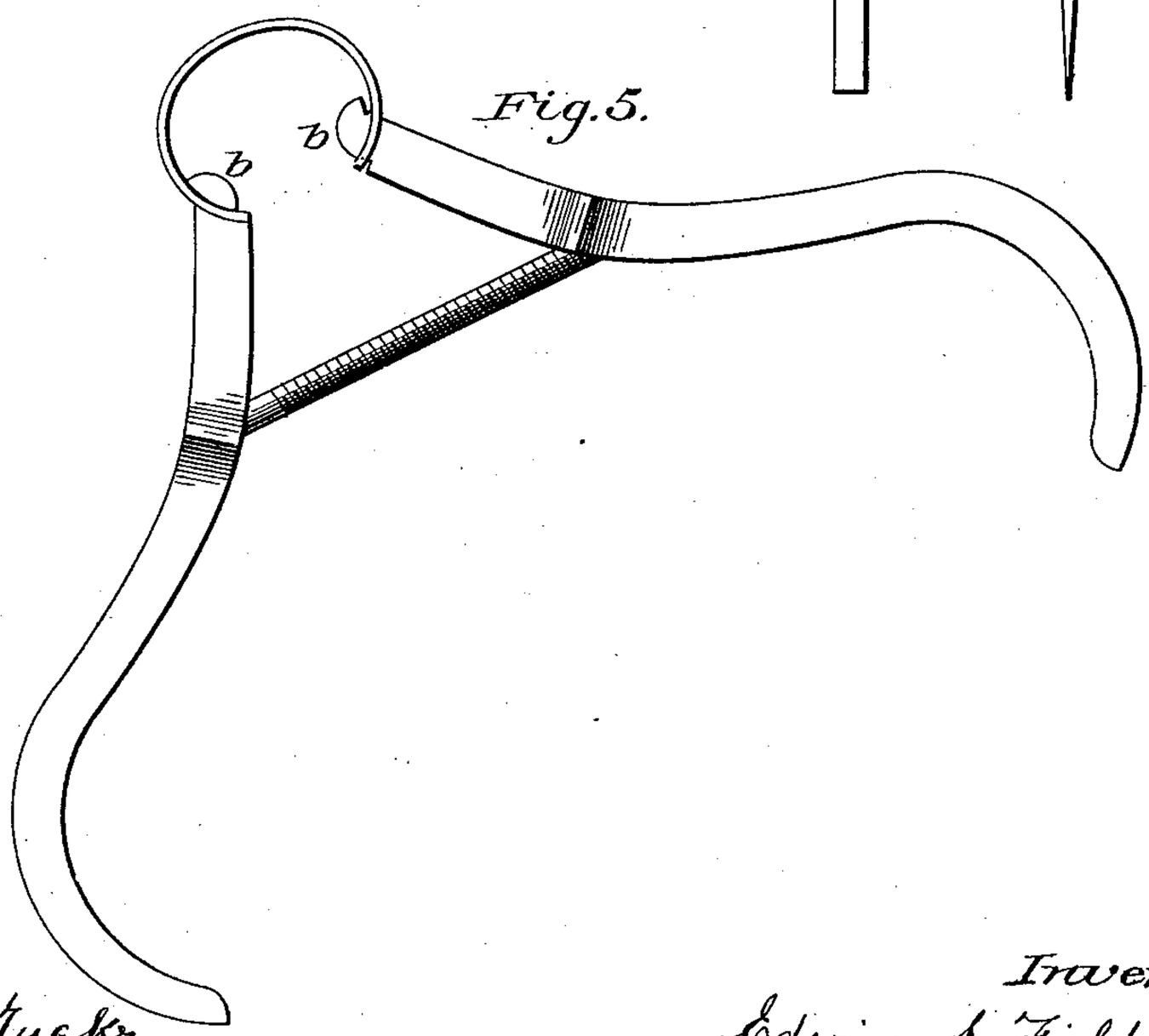


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN S. FIELD, OF SPRINGFIELD, ASSIGNOR OF ONE-HALF TO JOSEPH M. DAVIS AND JOHN G. SODERBERG, OF WORCESTER, MASSACHUSETTS.

SPRING-CALIPERS.

SPECIFICATION forming part of Letters Patent No. 332,244, dated December 15, 1885.

Application filed September 17, 1884. Serial No. 143,319. (No model.)

To all whom it may concern:

Be it known that I, EDWIN S. FIELD, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Spring Calipers and Dividers and like Articles, of which the following is a specification.

My invention relates to spring-calipers having the bow or spring made separate from the legs; and the objects of my improvements are, first, to lessen the cost of manufacture; second, by making one bow or spring sufficient for two or more tools. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view of the bow before bending. Fig. 2 is a sectional view of a leg, one end armed with a hook; Fig. 3, a view of the calipers assembled; Fig. 4, a view of legs of different tools; Fig. 5, a view of bow and legs in the act of assembling.

Similar letters refer to similar parts throughout the several views.

The bow or spring A is preferably cut from sheet-steel of suitable thickness, and the holes *d* punched or prepared before bending. At the present time in the manufacture of calipers the bow and legs are forged in one piece, and when a bow breaks, as often occurs, the whole forging with the labor thereon has to be thrown away.

In my invention, if a bow breaks, which is not as liable to happen, the loss is very small, as it is practicable to use better stock and obtain a better temper at a less cost for material, while the legs can be made of a lower grade of steel or other material easier to work.

I have petitioned for and described my invention as spring calipers and dividers. A difference in the shape of the legs C C makes different tools. Pointed straight legs, as *h* in Fig. 4, make dividers. One leg bent as C in Fig. 3, with the other straight as G in Fig. 4, makes what is called "key-hole calipers," and so on. One bow will answer for all combinations, and it is my design to place them on the market with one bow and different-shaped legs, so the purchaser can make what combination he wishes without being to great expense, as is now the case.

In assembling, the hooks *b b* on the end of legs C C, as shown in *b*, Fig. 2, interlock in the aperture *d* of the bow A, which is left open enough from a true circle, as in Fig. 5, to give the necessary spring or tension. The legs are then brought together, the screw F pushed through the holes in the legs made for its reception, and the nut E, Fig. 3, or other suitable contrivance, is screwed or put onto the screw F or its equivalent. This holds them firmly in place, and they are ready for use.

I claim as my improvement—

1. In calipers and dividers, the combination of the spring A, provided with apertures *d d*, with the legs C C, formed with hooks *b b* to enter said apertures, substantially as described.

2. In calipers and dividers, the combination of the legs C C, formed with hooks *b b*, and the interlocking spring A, provided with apertures for the reception of the hooks *b b*, with the screw F and nut E, substantially as described.

3. In calipers and dividers, the combination of the interlocking spring A with the legs C C, formed with hooks *b b*, entering apertures in the spring, whereby said legs may be removed and others substituted therefor, substantially as described.

EDWIN S. FIELD.

Witnesses:
RALPH W. ELLIS,
THOMAS B. WARREN.