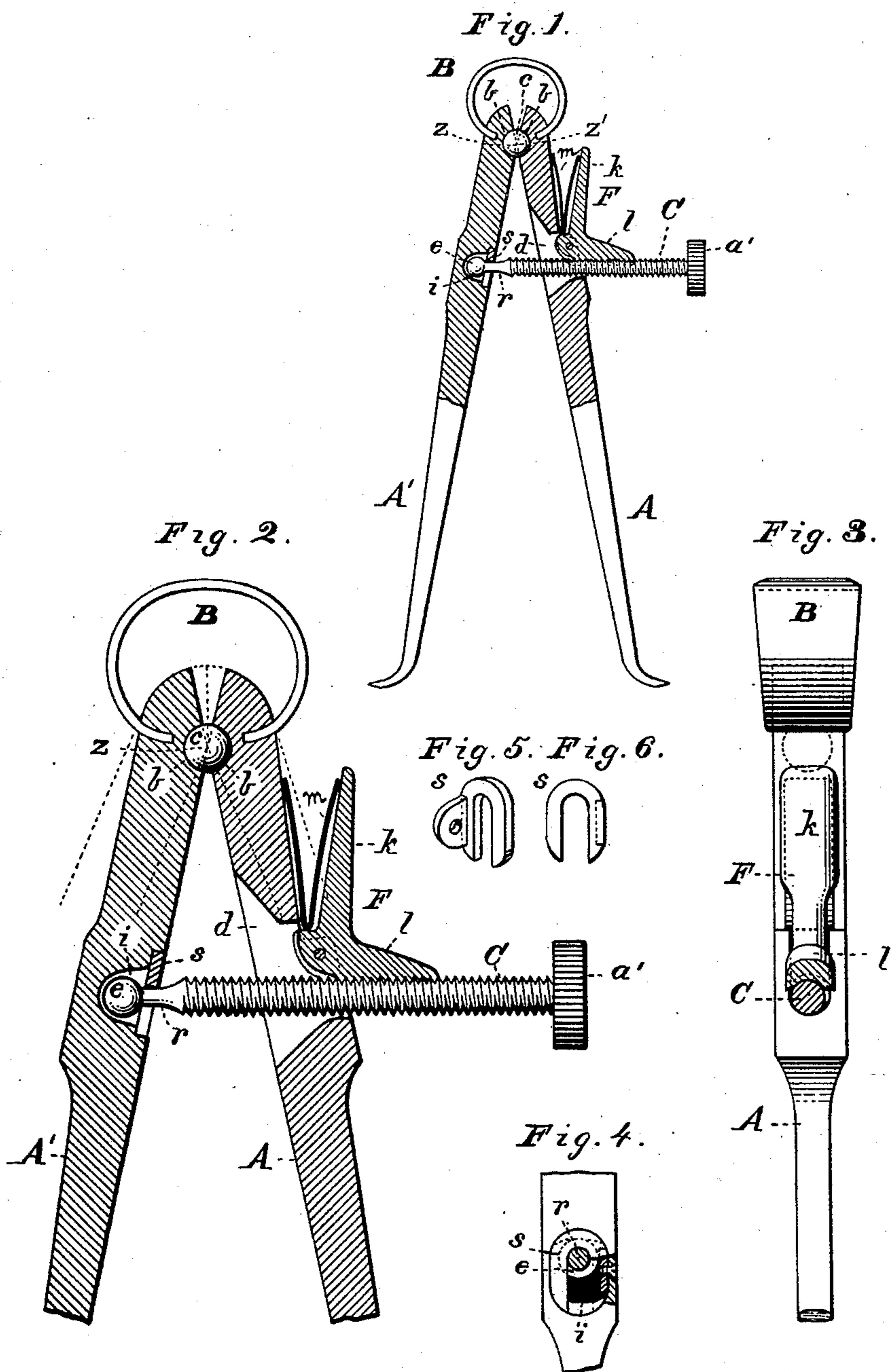


(No Model.)

W. H. STUART.
CALIPERS OR DIVIDERS.

No. 429,069.

Patented May 27, 1890.



WITNESSES

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WILLARD H. STUART, OF CHICOPEE FALLS, MASSACHUSETTS.

CALIPERS AND DIVIDERS.

SPECIFICATION forming part of Letters Patent No. 429,069, dated May 27, 1890.

Application filed June 29, 1889. Serial No. 316,065. (No model.)

To all whom it may concern:

Be it known that I, WILLARD H. STUART, a citizen of the United States, and a resident of Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Calipers and Dividers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention and is a vertical section. Fig. 2 is an enlarged view of the same, the low ends being broken off. Fig. 3 is a side view, a section being taken through the operating-screw and nut-pawl. Figs. 4, 5, and 6 are details.

This invention relates to calipers and dividers; and it consists in the novel construction and combination of parts, as hereinafter set forth.

In the accompanying drawings, the letters A A' designate the legs of the calipers, having at their ends the inner angular bearing-surfaces, as at $z z'$, which are provided with a ball-and-socket joint.

A compressing bow-spring B, the ends of which engage notches in the outer portions of the upper ends of the legs opposite to the upper portion of the ball-and-socket joint, serves to hold the legs together and to give the outward action.

C is a transverse threaded operating-screw, which passes through a slot d of the leg A to engage by its spherical end e a recessed bearing i of the opposite leg A'.

F is an L-shaped pivoted half-nut, pivoted by its angular portion in the slot d on the outer edge of the leg A to engage the threads of the operating-screw C. The pivoted half-nut F consists of a vertical stem or finger-piece k and a horizontal concave threaded shoe l . The stem k of the half-nut forms an acute angle with the outer edge of leg A. In

the angle thus formed is secured to the upper end of the stem k a spring m , which causes the threaded shoe l of the half-nut to remain in contact with the operating-screw C. The under portion of the shoe l is concave and threaded, as above described, to correspond with the threads of the screw C for the coarse and quick adjustment of the instrument. The arc of each thread of the shoe is less than half the full thread of the screw, as shown. The operating-screw C is provided on its outer end with a milled head a' , whereby the screw can be easily turned in making a finer adjustment, if necessary, after the legs have been spread. The inner end of the screw C is provided with a spherical or other suitable head e , formed at the extremity of a tapering portion r . This head has its bearing in the recess i of the leg A', and is retained therein by a U-shaped keeper s .

The angular inner portions of the heads of the legs A A' are usually made with hemispherical recesses b on their opposing faces, to form bearings for the ball c , when the legs are connected and held together by the bow-spring B, so that a simple and effective joint is provided.

When the calipers are at rest, the half-nut F is held by its spring in constant contact with the thread of the operating-screw, but is released by pressing against the stem or lever-arm k of said half-nut, this operation causing the latter to rise from the screw and permitting the legs of the instrument to diverge under the retractive action of the bow-spring.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The calipers and dividers comprising the connected legs, the screw having a ball-and-socket joint in one leg and passing through a slot in the other leg, and the spring-pressed half-nut pivoted upon the latter leg and engaging said screw, substantially as set forth.

2. The calipers and dividers consisting of the legs having a ball-and-socket-joint connection at their upper ends, and a bow-spring

engaging notches in said ends and tending to
give said legs their outward movement, in
addition to holding them together, the screw
having a ball-and-socket joint in one leg and
5 passing through a slot in the other leg, the
L-shaped half-nut pivoted upon the latter leg
and engaging said screw, and the spring in-
terposed between one of said legs and the

arm of said half-nut, substantially as set
forth. 10

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

WILLARD H. STUART.

Witnesses:

JAMES H. LOOMIS,
FRED N. WITHREL.