

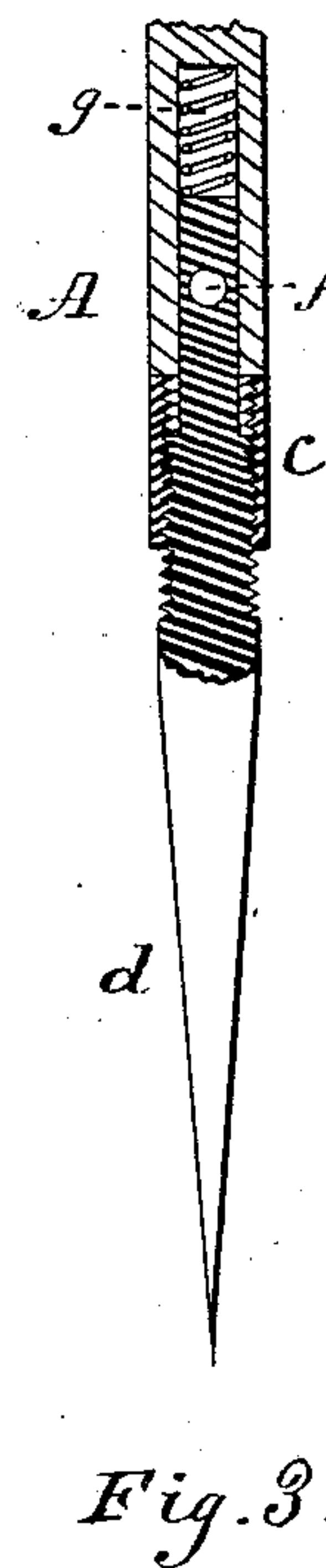
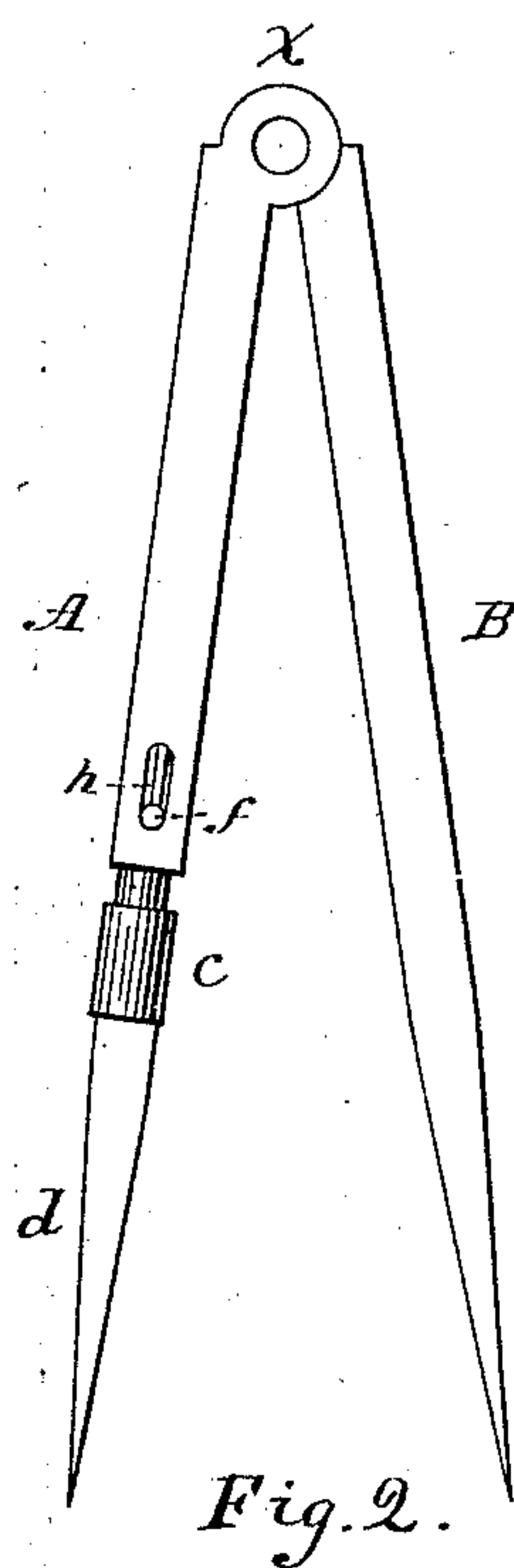
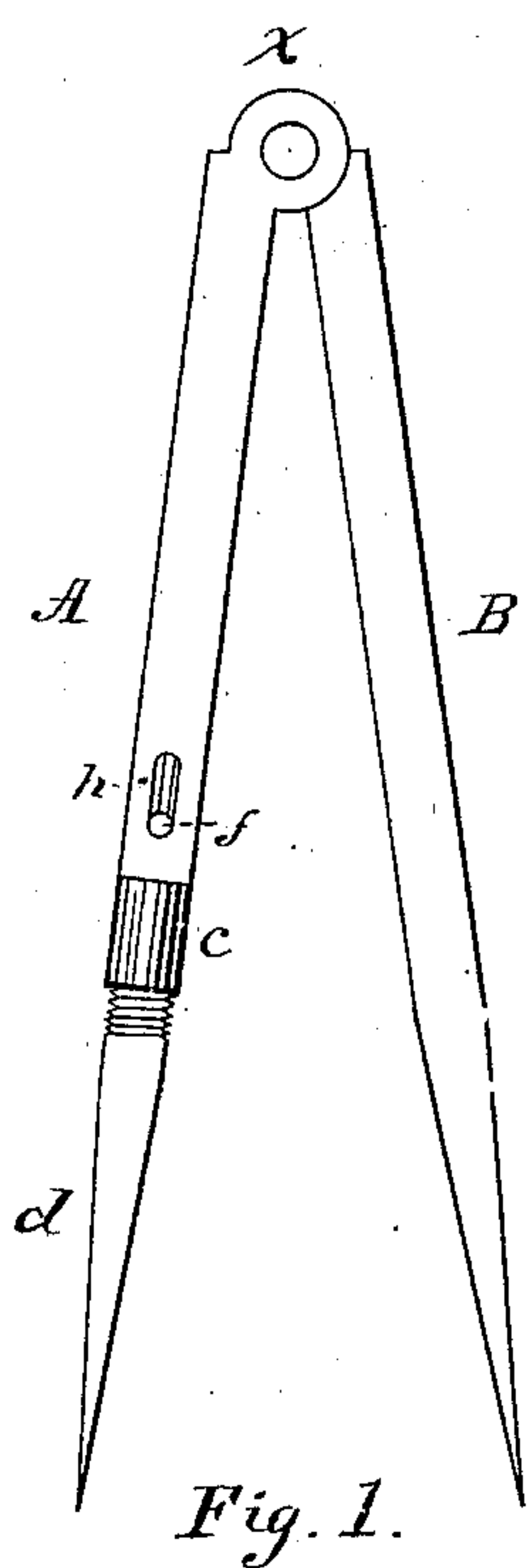
(No Model.)

J. H. CROWELL.

DIVIDERS.

No. 285,017.

Patented Sept. 18, 1883.



Witnesses:
Geo B Arnold
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UNITED STATES PATENT OFFICE.

JOHN H. CROWELL, OF PROVIDENCE, RHODE ISLAND.

DIVIDERS.

SPECIFICATION forming part of Letters Patent No. 285,017, dated September 18, 1883.

Application filed December 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CROWELL, of Providence, Rhode Island, have invented a new and useful Improvement in Dividers, of which the following is a specification.

My invention relates to an improvement in dividers used in drawing circles, measuring figures, &c.; and the object of my improvement is to facilitate the accurate drawing of circles on plane and uneven surfaces of metal or other hard material.

I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figures 1 and 2 are elevated views of dividers, showing different adjustments of my improvement; Fig. 3, an enlarged vertical section of the leg of the dividers, showing my improvement as adjusted in Fig. 1.

In the present instance, to illustrate and explain my improvement, I have applied it to one leg of a pair of the most simple form of dividers, for of whatever known practical form the dividers may be constructed for drawing circles it will not interfere with the application of my improvement to one or both legs of them.

A B represent the two legs of a pair of dividers, jointed at *x*. The leg A is made shorter than the solid leg B, and has its free end constructed in the form of a sleeve, as shown in Fig. 3, and into which is fitted one end of the longitudinally-movable point *d*, which is limited in its movement to the length of a slot, *h*, made in the leg A, and in which slides the pin *f*, which is secured to the point *d*, and prevents the said point from coming entirely out of the sleeve. In the sleeve of the leg A is placed the spiral spring *g*, which presses against the end of the point *d*, causing said point to become a yielding point pressed out of said sleeve as far as the pin *f* will allow it. *c* is an adjustable screw-sleeve fitted to and having a longitudinal screw movement on the point *d*.

The advantage and operation of my improvement compared with dividers as heretofore constructed are as follows: Heretofore dividers have usually been constructed in such manner that when adjusted for use they are solid and unyielding longitudinally from their points to the center of their jointed ends. In drawing circles with such dividers, particularly on hard and uneven surfaces, it is with

difficulty and uncertainty that the point which is held at the center of the circle is retained in position, for the reason that any excess of pressure upon the point which is marking the circle over and above that applied on the point at the center will invariably displace said center point, and thus retard the facility and injure the accuracy of drawing the circle.

In using my improved dividers the point of the solid leg B in the present instance is placed at the center, around which the circle is to be drawn, while the yielding point *d* of leg A is used to mark the circle. Now, any excess of pressure, though variable, upon point *d*, instead of displacing the center point, will only cause said point *d* to yield automatically to said pressure. Thus the center point maintains its central position to the completion of the circle, which facilitates its construction and accuracy. When it is desired to have the point *d* unyielding, for the purpose of measuring figures, &c., the screw-sleeve *c* is screwed against the end of the leg A, which prevents any longitudinal movement of said point.

I am aware that prior to my invention dividers have been made with yielding points. I therefore do not claim such, broadly; but

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

1. As an improved article of manufacture, a pair of dividers, the upper portion of one leg of which from the jointed end to within a convenient distance of the point is constructed in the form of an ordinary leg of a pair of dividers, the remaining portion of said leg to the point consists of a longitudinally-yielding point, and mechanism for holding said point rigid and for preventing said point from becoming detached when adjusted as a yielding point, said upper portion of the leg, with the said mechanism and yielding point, all being complete in and forming one and the same leg of the dividers, substantially as shown and described.

2. In a pair of dividers, the combination of the adjustable screw-sleeve *c*, yielding point *d*, pin *f*, slot *h*, and spring *g*, with the leg A, substantially as and for the purpose described.

JOHN H. CROWELL.

Witnesses:

GEO. B. ARNOLD,
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