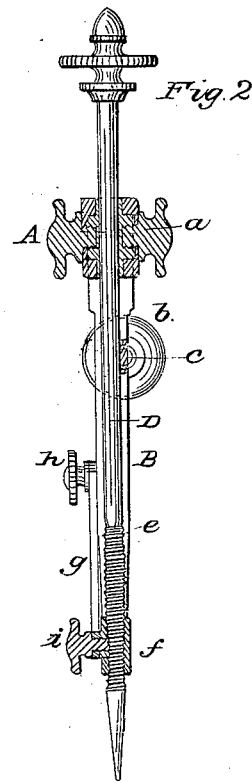
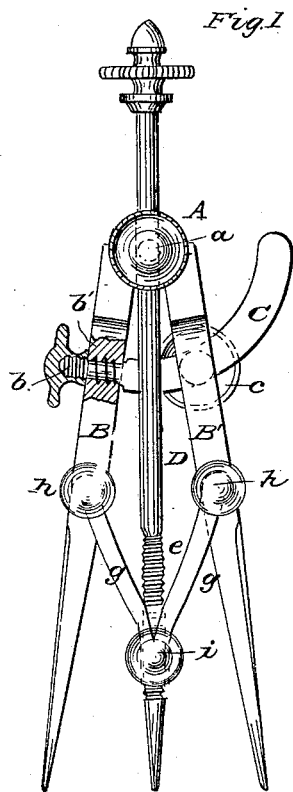


S. A. SHURTLEFF.

Dividers.

No. 50,173.

Patented Sept. 26, 1865.



WITNESSES  
Wm Greun  
Geo Tusch

INVENTOR  
S. A. Shurtleff  
per Mum & Co  
Attorneys

# UNITED STATES PATENT OFFICE.

S. ADDISON SHURTLEFF, OF TAUNTON, MASSACHUSETTS.

## IMPROVEMENT IN DIVIDERS.

Specification forming part of Letters Patent No. 50,173, dated September 26, 1865.

*To all whom it may concern:*

Be it known that I, S. ADDISON SHURTLEFF, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Dividers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional front elevation of this invention. Fig. 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

This invention consists in combining with the ordinary legs of a pair of dividers a centering-leg, which passes down through the head of the dividers and is adjustable in a nut suspended by suitable links or toggle-arms from the ordinary legs in such a manner that said centering-leg can be adjusted up and down, according to the position of the main legs, and that by the centering-leg the distance measured off by the main legs can be divided off in two equal parts without loss of time.

A represents the head of a pair of dividers, which forms the bearings for the pivot *a*, on which the two legs *B B* swing. In order to keep these legs steady while they open and close, an arc, *C*, is secured to the leg *B*, and made to pass through a mortise in the leg *B'* in the usual manner. A screw, *b*, and spring *b'* serve to give to the legs the final adjustment after the same have been set and fastened by the set-screw *c*, passing through the leg *B'* and bearing on the arc *C*. The head *A* is perforated with a round hole to receive the centering-leg *D*. The leg passes freely through the hole in the head, and it is provided with a screw-thread, *e*, which is tapped into a nut, *f*, and this nut is suspended from the main legs by means of two toggle-arms or links, *g*, as clearly shown in Fig. 1 of the drawings. The links *g* connect to the main legs by means of pivots *h*, and to each other and to the nut *f* by

the pivots *i*, and they are exactly equal in length, so the nut will always remain in the center between the main legs, whatever the position of the latter.

If it is desired to find the center of a certain distance or the middle of a line, the points of the main legs are placed in the ends of the line and the centering-leg is screwed down until its point strikes the surface on which the main legs rest. The indentation produced by the point of the centering-leg indicates the correct center between the two indentations made by the points of the main legs.

If the point of the centering-leg should be found to be not exactly in the center between the points of the main legs, the defect can be easily regulated by the nut and spring applied to one end of the arc *C*.

By the use of my centering-dividers the workman is enabled to put the tool onto the work and find the center instantly, thereby saving much time and labor; and, furthermore, the work is done with great accuracy, and even a careless workman cannot possibly miss the center.

By raising the centering-leg my dividers can be used precisely like ordinary dividers.

If desired, the centering-leg, instead of being made to screw into the nut *f*, might be made smooth and passed through a plain socket, which would take the place of the nut. A simple set-screw or other suitable device could be used to secure the centering-leg in the desired position.

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

1. The centering-leg *D*, arranged in combination with the main legs *B B'*, substantially as and for the purpose described.

2. Passing the centering-leg through the head of the dividers, substantially as and for the purpose specified.

S. ADDISON SHURTLEFF.

Witnesses:

BERNARD A. GALLIGAN,  
C. H. KUKLAND.