

**CHAS. M. NICHOLS,**  
*Dividers.*

No. 119,875.

Patented Oct. 10, 1871.

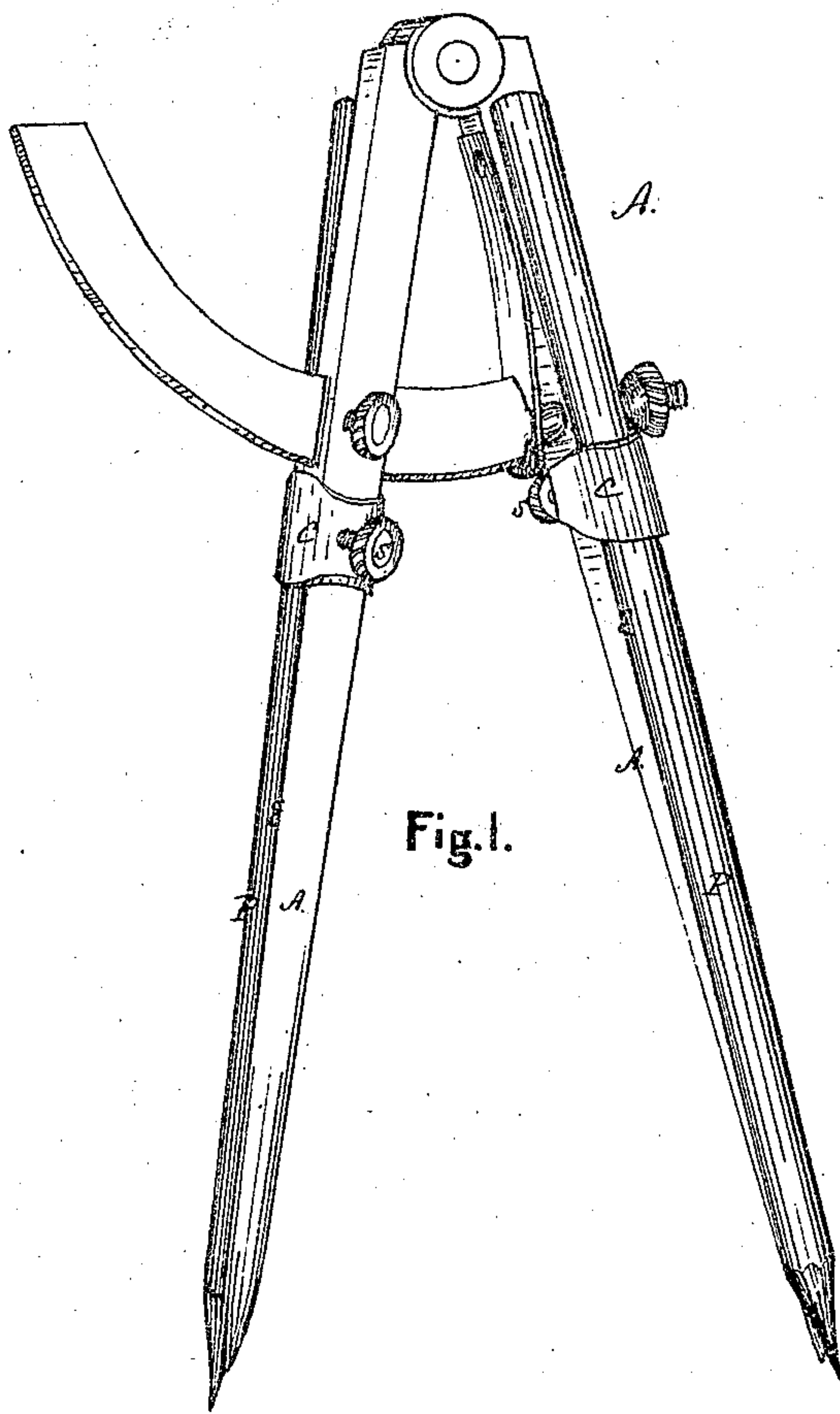


Fig. 1.

Witnesses.

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# UNITED STATES PATENT OFFICE.

CHARLES M. NICHOLS, OF WEST GREENWICH, RHODE ISLAND.

## IMPROVEMENT IN DIVIDERS.

Specification forming part of Letters Patent No. 119,875, dated October 10, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES M. NICHOLS, of West Greenwich, in the county of Kent and State of Rhode Island, have invented certain Improvements in Dividers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which my invention is represented by a perspective view.

My invention has for its object to improve that class of dividers which is adapted to receive marking-pens or pencils for drawing parallel lines simultaneously.

The means heretofore employed to accomplish this result consists in passing the pencils through short metal tubes, which are then slipped upon the legs of the dividers, the friction of the tubes upon the tapered legs serving to hold the attachment in place. This method of applying the pencils is objectionable for the following reasons, to wit: First, the tubes must at all times be held at the same point upon the legs, and are consequently incapable of adjustment to compensate for the wear of the pencils. When, therefore, the latter become so worn as to extend only to the points of the legs their places must be supplied with new and longer ones. Second, the pencils being arranged upon the outside of the legs, the latter in all cases being round, the tubes are liable to turn on the legs, thereby changing the relative position of the pencils. For example, the dividers, with the pencils on the outside of the legs, being first opened to the predetermined distance for marking parallel lines, are moved over the object to be marked; as the marking proceeds the pencils and their tubes turn on the legs, following the latter, and consequently decreasing the distance between the lines. The same objection arises, also, when but one pencil is used in describing a circle.

My invention is designed to overcome these difficulties; and to this end it consists in changing the construction of the dividers themselves, by forming a longitudinal groove in each leg, the grooves being on opposite sides of the dividers, in which the pencils are held by clasps capable of adjustment upon both the pencils and legs.

By this construction the pencils are prevented

from turning around the legs, and are rendered adjustable at any point between the ends of said legs and their pivot.

In the drawing, A is a pair of common dividers, having a longitudinal groove, *e*, in the side of each leg, arranged on that side which will be the right side of the leg, further from, and the left side of that nearer to, the spectator, the grooves, of course, being on opposite sides of the instrument. In connection with each groove I employ one or more clasps, C, sliding on the leg, and provided with a set-screw, *s*, to fix it in place at any point, and at the same time to clamp the pencil P firmly in the groove. The ends of the legs are pointed, so that the instrument without the pencils and clasps will not differ from the old-fashioned dividers except in the employment of the grooves.

The instrument thus formed is not a mere duplication of the old-fashioned dividers, with provision for holding a single pen or pencil, but is capable of several new and convenient uses. It will be found particularly useful in marking parallel lines, whether straight or curved, and in laying off figures from patterns, it being adapted to produce the figure at a distance from the edge of the pattern. In many instances it will prove very convenient where it is desirable to draw one curved line after another without raising the instrument from the paper or other plane surface.

The pencil, being on the right-hand side of the marking-leg, will always be supported thereby. A hole may be drilled in the side of the leg to receive the end of the set-screw, so that when the pencil is not in use the clasps shall not slip off of the instrument and get lost.

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

The dividers constructed with pointed legs of equal length having grooves *e e* arranged in each leg, as described, and provided also with the adjustable clasps *c c* to hold the pens or pencils within the grooves, as herein shown and described, for the purposes specified.

CHARLES M. NICHOLS.

Witnesses:

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(97)