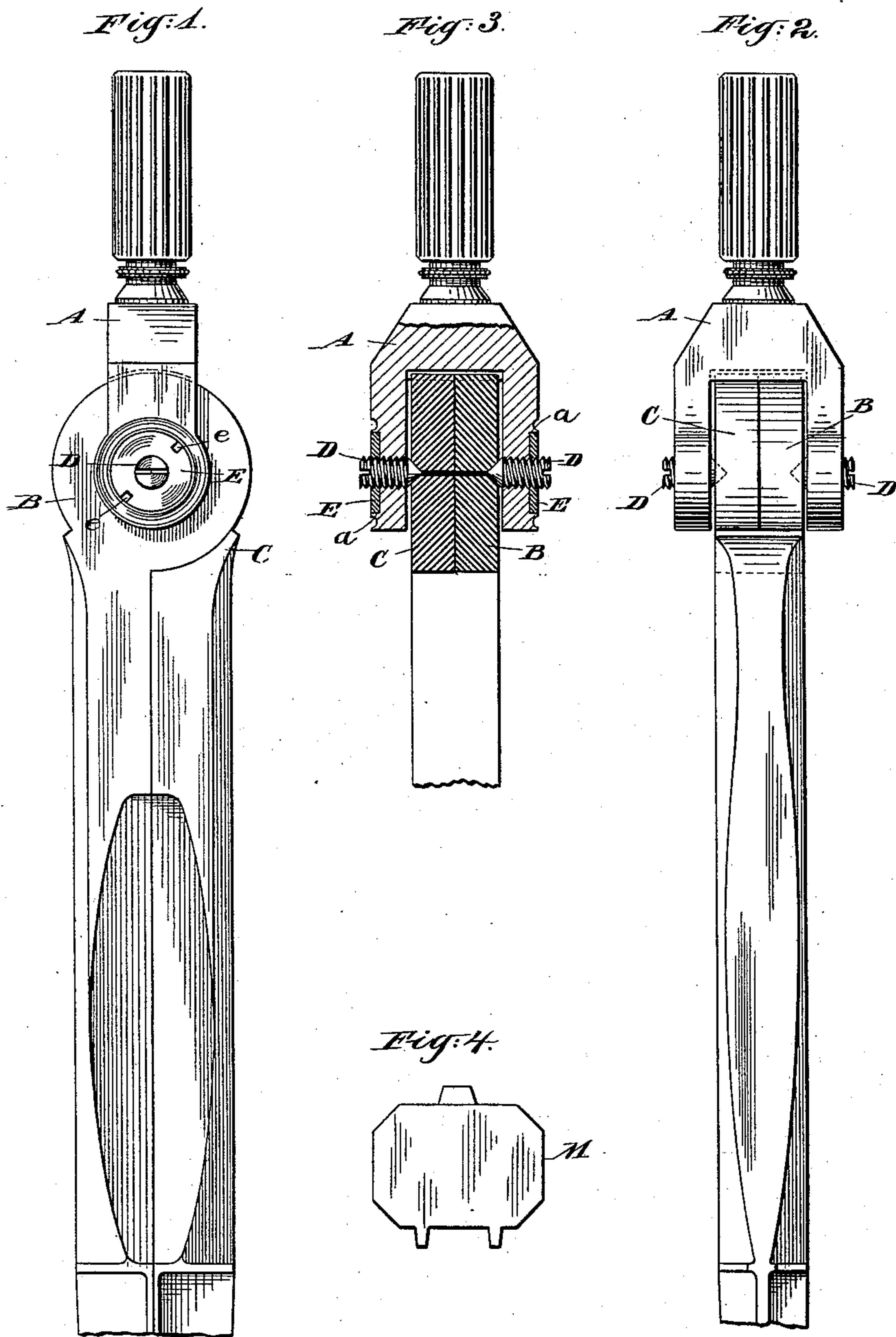


(No Model.)

H. ESSER.
DIVIDERS.

No. 494,132.

Patented Mar. 28, 1893.



Witnesses:

Charles R. Searle,
M. F. Boyle.

Inventor:

Hermann Esser
by his attorney
Thomas Spruett

UNITED STATES PATENT OFFICE.

HERMANN ESSER, OF HOBOKEN, NEW JERSEY.

DIVIDER.

SPECIFICATION forming part of Letters Patent No. 494,132, dated March 28, 1893.

Application filed December 14, 1892. Serial No. 455,121. (No model.)

To all whom it may concern:

Be it known that I, HERMANN ESSER, a citizen of the United States, residing at Hoboken, Hudson county, in the State of New Jersey, have invented a certain new and useful Improvement in Draftsmen's Dividers, of which the following is a specification.

Draftsmen's dividers require a joint having delicately adjustable friction. It has long been common to embrace the heads of dividers, by a forked handle, through which conically pointed screws are tapped, which engage in corresponding recesses at the axis of motion of the legs. Heretofore such screws have been held by another pair of screws tapped into the forks, so as to press laterally against the main screws. Such are objectionable from their liability to injure the threads of the main screws. They are also unsightly, and are too weak to remain efficient. I have discovered that the screws can be held reliably by lock-nuts sometimes termed jam-nuts, and that by allowing a greater length of the screw to be tapped through the arm, the screw will not be disturbed in position by tightening and slackening the jam-nut. I employ such means to hold the screws, and thereby improve the appearance and convenience of the instrument, and avoid the risk of injuring the screw-threads.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation, and Fig. 2 is an elevation at right angles thereto. Fig. 3 is a central longitudinal section, partly in elevation. Fig. 4 represents the key.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is the fork which serves as the handle of the dividers, each arm formed with a circular end a little larger than the heads on the divider-legs, tapped as shown, and each having a shallow recess *a* in its outer face concentric to the axis, as indicated.

B and C are heads and adjacent portions of the legs which require to be held with delicately adjustable friction. The arms of the

fork receive screws D, D, having conical points which engage in corresponding conical recesses in the outer face of each head. On each screw I apply a thin disk E, tapped to correspond therewith, and of such size that it is received in the shallow recess *a* in the arm. Each disk is provided with two notches *e, e*, adapted to receive the corresponding prongs of a key M, and serve as a jam-nut having little thickness and an easy fit. It makes but little friction on the screw in being turned. After a screw is set in its arm to give the delicately adjusted amount of friction required on the heads B, C, the prongs of the key are engaged in the notches *e*, and turned, correspondingly turning the jam-nut, causing it to press strongly in the base of the corresponding recess *a* in the arm, and holding the screw stiffly by the friction thus induced. The disk or jam-nut, when sufficiently turned, induces the required friction, while its slight thickness and easy fit avoid risk of changing the position of the screw in slackening and tightening the jam-nut. By the sinking of the thin jam-nuts in the recesses as shown, the instrument presents a tasty, well-proportioned and ornamental appearance.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. I can vary the form of the jam-nuts. It is only important that they be provided with means for turning them. The screws D may have much finer threads than are shown. The position of the jam-nuts can be changed so that they lie on plane outer surfaces of the forks instead of being sunk into recesses therein.

I claim as my invention—

In a pair of dividers, the fork A, in combination with the conical-ended screws D, corresponding heads B, C, and jam-nuts E, *e*, arranged to serve substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

HERMANN ESSER.

Witnesses:

CHARLES R. SEARLE,
M. F. BOYLE.