No. 672,124. Patented Apr. 16, 1901.

J. HAMILTON.

MICROMETER ATTACHMENT.

(Application filed Aug. 22, 1900.)

(No Model.)

Fig. 1.

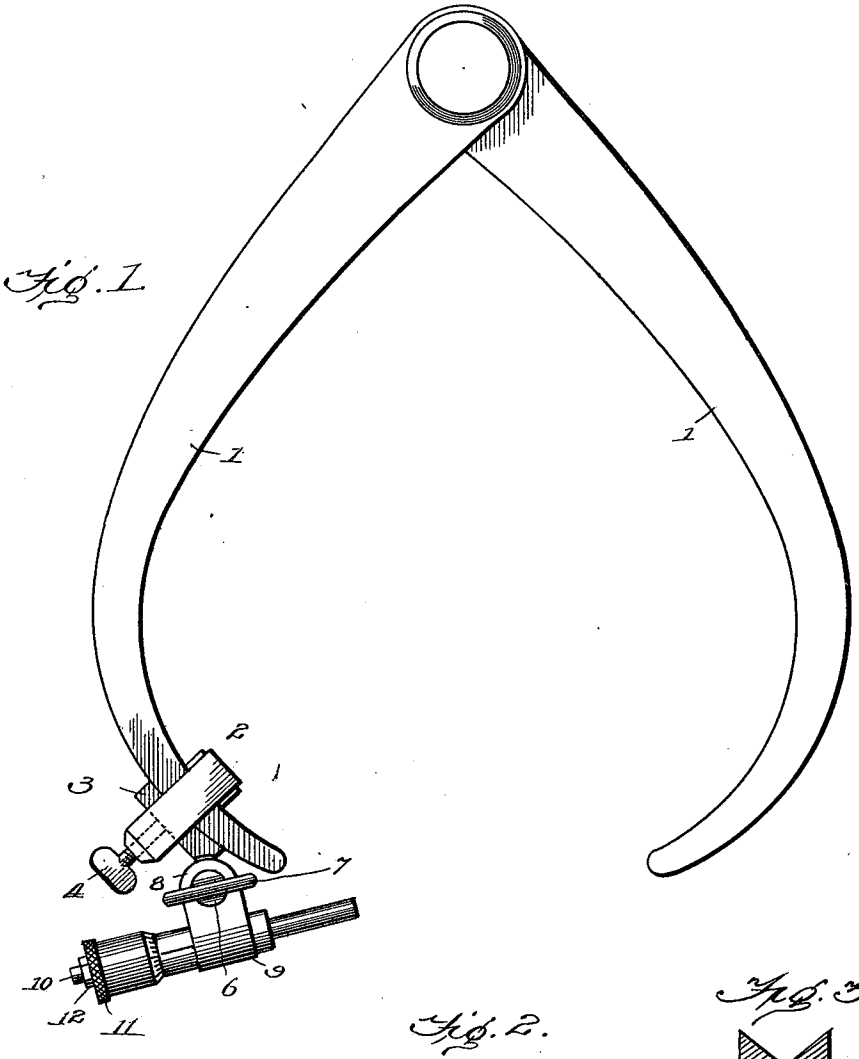


Fig. 2.

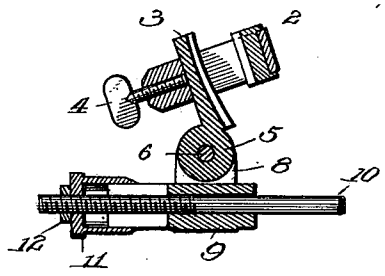


Fig. 3.



Witnesses
Harry S. Robertson
Herbert D. Lawson.

Inventor:
Justin Hamilton.
By Victor J. Evans
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JUSTIN HAMILTON, OF AUBURN, NEW YORK.

MICROMETER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 672,124, dated April 16, 1901.

Application filed August 22, 1900. Serial No. 27,700. (No model.)

To all whom it may concern:

Be it known that I, JUSTIN HAMILTON, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented new and useful Improvements in Micrometer Attachments, of which the following is a specification.

This invention relates to new and useful improvements in micrometer attachments for calipers, and is adapted for use in measuring objects by increasing or diminishing the distance between the contact-points.

One object of the invention is to provide an attachment which may be readily secured to calipers of ordinary form and which provides means for making a minute and accurate adjustment of the contact-points without altering the adjustment of the calipers to which the device is secured.

A further object is to provide means whereby said attachment may be readily swung to a desired inclination and by means of which the amount of adjustment thereof can be definitely and accurately determined.

To these ends the invention consists in providing a sleeve having ears thereto which are pivoted to a block which is loosely fitted within a yoke adapted to inclose one of the arms of the calipers. This block is contacted by the end of a set-screw and is adapted to be firmly clamped against the edge of the arm of the calipers. The sleeve, before referred to, is threaded and adapted to receive a screw, at the rear end of which is a cap which extends over the sleeve and which is secured to the screw preferably by means of a lock-nut. This cap is provided along its inner edge with suitable graduations which are adapted to register successively with a suitably-disposed line placed upon the sleeve.

The invention also consists in certain novel features of construction and combination of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a view of a pair of calipers with the micrometer attachment secured thereto. Fig. 2 is a longitudinal section through the attachment. Fig. 3 is a transverse section through the removable block.

Referring to the drawings by numerals of reference, 1 1 are the arms of a pair of calipers, one of which is encircled near one end by a yoke 2. A block 3 is fitted within this yoke and provided with a concave edge which is substantially V-shaped in cross-section and which is adapted to be firmly bound upon the edge of the arm 1. A set-screw 4 passes through and engages the outer end of the yoke 2 and bears upon the removable block 3. It is obvious that by turning this set-screw inward said yoke will be firmly clamped in position. An 5 ear extends from the block 3 and is pivoted upon a pin 6, which is threaded at one end and provided at its opposite end with a head 7, adapted to be turned by hand. This pin passes through ears 8, which extend laterally from a sleeve 9, the threaded end of said pin engaging one of the ears, so as to permit the parts to be firmly bound together. The sleeve is threaded internally, so as to engage a screw 10, which extends therethrough and upon the threaded end of which is mounted a cap 11. This cap is firmly secured to the screw by means of a lock-nut 12 and extends over the end of the sleeve and is provided along the inner edge thereof with suitable graduations, as shown in Fig. 1. These are adapted to be brought into alinement successively with a mark, which is arranged upon the outer face of the sleeve and will indicate the distance of the end of the screw from the adjoining end of the sleeve.

It will be seen that by the above construction the screw and sleeve may be readily turned at any desired angle and locked in position without affecting the adjustment of the calipers.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved micrometer attachment for calipers will be readily understood without requiring an extended explanation. It will be seen that the device is simple of construction, that said construction permits of its manufacture at small cost, and that it is exceedingly well adapted for the purpose for which it is designed, and it will of course be understood that various changes in the form, proportion, and the minor details of construc-

tion may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

In a micrometer, the combination with an internally-threaded sleeve; of a screw therein, a cap engaging one end of the screw and extending over a portion of the sleeve, ears to the sleeve, a block, a concave face to the block V-shaped in cross-section, an ear extending from the block and between the ears of the sleeve, means for binding said ears together, a yoke adapted to receive the block, and a set-screw within the yoke and normally contacting with, but independent of, said block.

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

JUSTIN HAMILTON.

Witnesses:

D. E. FRENCH,

E. H. DAVIS.