(No Model.)

A. C. WINN.

CALIPER SQUARE.

No. 302,079. Patented July 15, 1884.

Fig. 1.

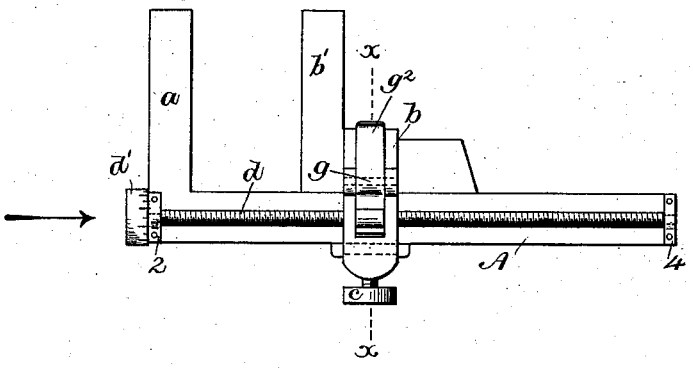


Fig. 3.

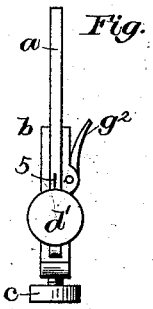
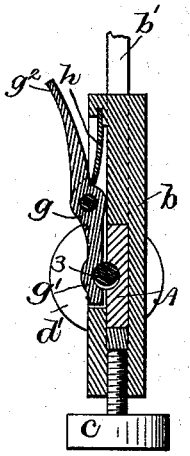


Fig. 2.



Witnesses
Henry Marsh
John F. C. Printkert

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by Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

ALBY C. WINN, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLIAM E. PAYNE, OF SAME PLACE.

CALIPER-SQUARE.

SPECIFICATION forming part of Letters Patent No. 302,079, dated July 15, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBY C. WINN, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Caliper-Squares, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention has relation to measuring-instruments, and is shown embodied in a caliper-square wherein the bar or shank has a fixed jaw or rest, and is provided with a movable jaw adapted to slide on the bar and to be secured thereto by means of a set-screw; and my said invention has for its object to enable the movable jaw to be more quickly and easily moved to attain a delicate adjustment with rapidity.

To this end my invention consists in a measuring device having a shank provided with a rotating screw-rod and a fixed jaw or rest, combined with a slide carrying a second jaw and adapted to slide on the bar, and being provided with a clamp having a threaded portion to engage the screw-rod on the bar or shank, to hold the movable jaw in fixed position with relation to the said bar or shank, the threaded portion of the clamp being operated by a lever, substantially as hereinafter fully described, and particularly pointed out in the claims.

Figure 1 represents in plan view a caliper-square containing my invention; Fig. 2, a transverse section on the line *x x*, Fig. 1, through the slide of the movable jaw carrying the screw-threaded clamp; and Fig. 3, an end view of Fig. 1, looking in the direction of the arrow.

The bar or shank A has a fixed jaw or rest, *a*, at one end, and is provided with a slide, *b*, carrying a jaw, *b'*, and provided with a set-screw, *c*, for securing the slide at any point to the bar A, the several parts being of any usual preferred construction, and provided with suitable or usual scales or marks. A screw-rod, *d*, having an adjusting thumb-nut or wheel, *d'*, is secured to the bar or shank A in the bearings 2 4, and passes through a slot, 3, in the slide *b*. A clamp, *g*, having a threaded portion to engage the threads of the screw-rod, is attached to the slide *b*. The threaded portion of the clamp *g*, moved by a spring, acts as a half-nut and permits the slide to be moved by the screw-rod to hold the slide to the rod; but when the clamp is moved to disengage the half-nut from the screw-rod the said slide may be freely and rapidly moved on the bar, and when nearly in the desired position the clamp will be released, in order that said clamp may again engage the screw-rod. When the slide carrying the movable jaw is moved to the proper position, it may be locked there by the set-screw *c*. In the present instance the screw-rod partially rests in a groove in the bar or shank A, and the fastening projections of the bearing 4 are let into and flush with the face of said bar, to permit the slide *b* to be removed from the bar, the slot in the said slide receiving the screw-rod being enlarged to permit such removal. The bar or shank may be suitably graduated, and the adjusting nut or wheel may have finer graduations on its periphery, which, in connection with a pointer or indicator, 5, in the end of the bar, enables a very fine and delicate adjustment to be made.

As shown in Fig. 2, the clamp which engages the screw-rod consists, in the present instance, of a pivoted lever, *g*, having the half-nut or screw-threaded portion *g'* engaging the screw-rod and the thumb-plate g^2, which latter is acted upon by the spring *h*, to insure the engagement of the threaded portion *g'* with the screw-rod.

To adjust the caliper-square shown in the drawings, the clamp is disengaged from the screw-rod by pressing on the thumb-plate thereof, the slide bodily moved on the bar to about the point desired, the clamp released from pressure to cause the threaded portion to engage the screw-rod, and said screw-rod rotated in its bearings by means of the thumb-nut or adjusting-wheel, to cause the slide carrying the jaw *b'* to be moved to the desired point on the bar to get a delicate adjustment, when the set-screw *c* may be operated to lock the slide in its adjusted position.

I claim—

1. In measuring-instruments, the bar having the fixed jaw and a rotating screw-rod having bearings on the bar, combined with a

slide movable on the bar, and provided with the jaw *b*, and spring-actuated clamp, the said clamp having a threaded portion adapted to engage the threads of the screw-rod, and a finger portion to permit said clamp to be disengaged from the screw-rod, substantially as described.

2. The shank or bar having the bearings 2 4, as described, and provided with a screw-rod having a thumb-nut, combined with a slide having movement on the bar, and provided with a slot for the passage of the screw-rod and larger than the bearing 4, as described, a spring-clamp having threads to engage the screw-rod and lock the slide on the bar, as set forth.

3. The bar having the fixed jaw and pointer 5, and the screw-rod having bearings on the bar, and provided with the thumb-nut or adjusting-wheel with graduated periphery, as described, combined with a slide having movement on the bar, and provided with the jaw *b*, and the clamp *c*, having a threaded portion to engage the screw-rod and lock the slide on the bar, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBY C. WINN.

Witnesses:

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