J. M. CLARK, 3D.

CALIPER GAGE.

APPLICATION FILED JULY 22, 1918.

1,287,885. Patented Dec. 17, 1918.

Fig. 1.

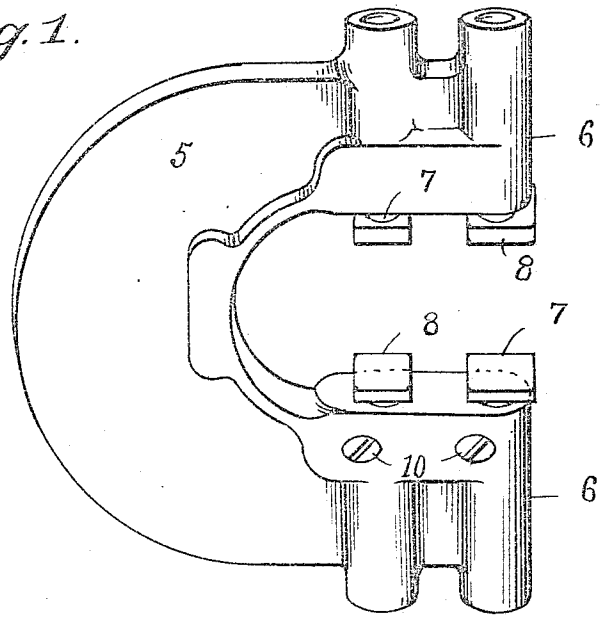


Fig. 3.

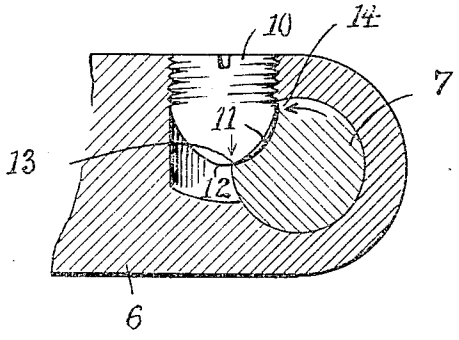
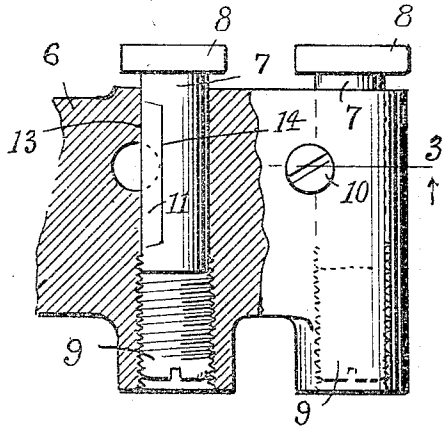


Fig. 2.



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

UNITED STATES PATENT OFFICE.

JAMES M. CLARK, 3D, OF BRIDGEPORT, CONNECTICUT.

CALIPER-GAGE.

1,287,885. Specification of Letters Patent. Patented Dec. 17, 1918.

Application filed July 22, 1918. Serial No. 246,026.

To all whom it may concern:

Be it known that I, JAMES M. CLARK, 3d, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Caliper-Gages, of which the following is a specification.

This invention relates to new and useful improvements in caliper gages or what are more commonly known as snap gages, the same being designed for machine shop work and for measuring diameters or distances.

The purpose of the invention is to simplify, improve and cheapen the cost of construction of gages of this sort, and particularly to produce a gage with adjustable pins of which may be firmly secured in position by a very small and inexpensive set screw.

Briefly speaking, the device comprises a cast metal yoke including a pair of arms spaced one from the other and each provided with a pair of movable pins which are adjusted by screws arranged against their outer ends and secured in position by set screws of special formation that engage concave grooves in the sides of the pins, as will be later more fully explained.

With these and other objects in view the invention resides and consists in the construction and novel combination, illustrated in the accompanying drawings, and pointed out in the claim hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claim may be resorted to without departure from the spirit or sacrificing any of the advantages of the invention.

Similar characters of reference denote like or corresponding parts throughout the several figures of the accompanying drawings forming a part of this specification, and upon which,

Figure 1 shows a side perspective view of my improved gage complete and ready for use.

Fig. 2 is a detailed sectional side view of one of the arms of the yoke, the same being shown upon an enlarged scale, and

Fig. 3 is an enlarged detailed cross section through the said arm and set screw as indicated on line 3 of Fig. 2.

Referring in detail to the characters of reference marked upon the drawings, 5 represents the body or yoke as a whole and 6—6 the two arms thereof that serve to carry the adjustable pins 7—7. The pins and their coöperating parts are each alike in construction and as contained in the one arm are duplicated in the other. The pins of the one arm are also in alinement with the pins of the other arm so that there operative ends or faces will be directly opposite, and in between which the work to be gaged is placed for the purpose of determining its size. The pins are provided with a square head 8 and cylindrical body or shank portion which are fitted into the holes of the arm and are set against the adjustable screws 9 threadably mounted in the lower ends of the pin holes so as to butt against the ends of the pins for the purpose of adjusting the same longitudinally.

The special feature of this device is the particular formation of the set screw 10 mounted in the arms and the coacting shape of the longitudinal groove 11 in the side of the pins and engaged by the set screw. These parts as designed and constructed serve to form a much better clamping engagement of the screw with the pin than any other form of construction with which I am familiar and thereby enables me to securely clamp the pins in position with comparatively small and inexpensive set screw. In this respect it will be seen that the groove formed in the side of the pin is a concave groove forming an elongated concave side face in the pin while the lower end portion of the screw is rounded to form a convex or spherical surface that fits into and engages the concave grooved pins. From this it will be seen that as the set screw is turned in its socket the lower rounded end portion indicated by 12 engages the shoulder 13 of the pin in a way to tend to slightly turn the pin and crowd its other shouldered portion 14 against the side of the set screw as indicated by arrows. In this way a torsional strain is put upon the pin, so that one shouldered portion operates against the other so as to form a grip between the two parts and one which as before stated may be effected by a very simple and inexpensive construction.

Having thus described my invention, what

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

In a gage of the class described the combination of a body portion including a pair of extended arms, each provided with elongated sockets that aline with the sockets of the opposite arm, and adjustable screw seated in the outer end portion of each of said sockets, and a pin movably fitted in each of the sockets and seated against the said screw and having a concave groove in one side and a set screw mounted in the body and having a rounded portion, so situated with relation to the groove in the pin that the rounded portion of the screw first engages one of the edges of the groove in a manner to tend to turn the pin and throw its other edge portion against the side of the screw to lock the parts together.

Signed at Bridgeport in the county of Fairfield and State of Connecticut this 19th day of July, A. D., 1918.

JAMES M. CLARK, 3D.

Witness:
C. M. NEWMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."