(No Model.)

S. E. STACY.

ADJUSTABLE GAGE.

No. 288,375. Patented Nov. 13, 1883.

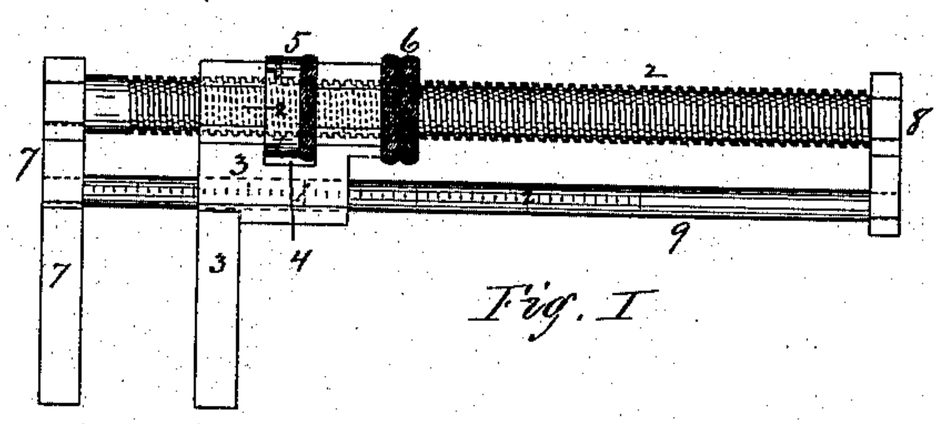

Fig. I

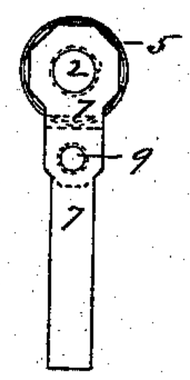

Fig. II

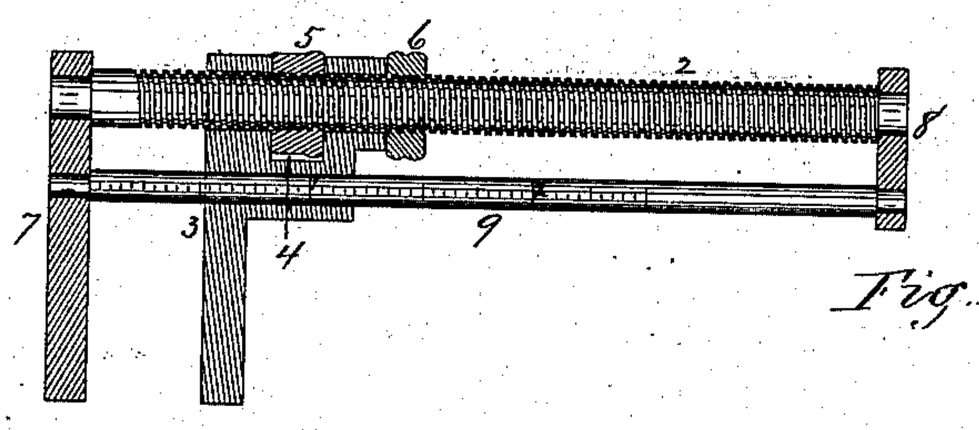

Fig. III

Witnesses.
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UNITED STATES PATENT OFFICE.

SANFORD E. STACY, OF SPRINGFIELD, MASSACHUSETTS.

ADJUSTABLE GAGE.

SPECIFICATION forming part of Letters Patent No. 288,375, dated November 13, 1883.

Application filed March 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, SANFORD E. STACY, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Adjustable Gages, of which the following is a specification and description.

The object of my invention is to provide an adjustable gage adapted to measure or caliper any article, and having one jaw fixed solid to the screw and guide bar and the movable jaw adjusted to any desired point along the screw-bar and graduated guide-bar; and I accomplish this by the mechanism substantially as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure I is a side view of my invention. Fig. II is an end view of the same, and Fig. III is a vertical longitudinal section at the axis of the screw-bar.

In the drawings, 2 represents a main bar, of cylindrical form, and having a screw-thread made substantially its entire length. To one end of this bar is firmly secured a jaw, 7, which is fixed in its position on the end of this screw-bar 2, and a movable jaw, 3, whose head is elongated and is provided with an opening, 4, has a hole made longitudinally through this elongated head, in which the screw-bar 2 is fitted, so that the jaw may be moved freely to and fro along this bar.

A nut, 5, has a screw-thread made through it, which is fitted to turn in the thread along the screw-bar 2, and this nut 5 is of such thickness as to fit snugly into the opening 4 in the direction of the length of the screw-bar, but so as to revolve freely in said opening, without lost motion, when turning on the bar. Another similar nut, 6, is adapted to be turned upon the screw-bar, and is located between the head of the jaw 3 and the block 8, so that it may be turned up against the rear end of the head of the movable jaw 3, as shown clearly in Figs. I and III.

A guide-bar, 9, extends through a hole in the movable jaw, and is firmly secured at one end in the fixed jaw 7, and at the other end in the block 8, the latter being also fixed to the end of the screw-bar 2.

Before the block 8 is secured in place to the end of the bar 2 the nut 5 is placed in the opening 4 in the head of the jaw 3, and the bar 2 is inserted through the hole in the front part of the head of the jaw 3 and into the nut 5, and the latter is then turned onto and along the bar 2 until the latter extends entirely through the head of the jaw 3, and the nut 6 is then turned on and both nuts turned along the bar until the end of the screw-bar extends entirely through the nut 6. The block 8 is then secured firmly to the ends of the screw-bar 2 and guide-bar 9, the latter being parallel with the screw-bar 2.

To render the instrument accurate for making minute measurements, I divide the circumference of the nut 5 into any desired number of equal parts and mark them—say, eight equal parts—and I make an index-mark on the head of the jaw 3, opposite the marked edge of the nut 5. I prefer to also mark the guide-bar 9 at equal distances along its length, as shown in Figs. I and III, so that a single revolution of the nut 5 on the screw-bar 2 will move the jaw 3 from one mark to the next along the guide-bar 9, so that if one of the subdivisions on the bar 9 equals one-twentieth of an inch and the circumference of the nut 5 is divided into eight equal parts the revolution of said nut 5 from one mark to the next on its circumference will move the jaw 3 along the bars 2 and 9 one-eighth of one-twentieth of one inch, or the hundred and sixtieth part of an inch. Of course any other subdivisions of the bar 9 and of the circumference of the nut may be made as desired and as may be most convenient for use.

To measure any article, the latter is placed between the jaws 7 and 3, and the nut 5 turned on the bar 2 until the jaw 3 comes into contact with the article on one side, while the inside of the jaw 7 is in contact with the other side, and when this is done nicely, but so the two jaws can be removed from the article, the nut 6 is turned up against the rear end of the head of the jaw 3, and the latter is thereby firmly held in that position on the bars 2 and 9.

This instrument is adapted to a great variety of uses, and is particularly adapted for use in tool-makers' work, and is much less complicated in its construction than the ordinary Vernier gage. If it is desired to use the gage for temporary measurements, the check-nut 6 may be turned back on the screw-bar 2 towards the block 8, and the gage used with

the operating-nut 5; but if it is desired to keep the measurements which may be taken for any length of time, the check-nut 6 may be used, as by turning the latter up against the rear end of the head of the jaw 3 the latter cannot possibly be moved out of place, even by any attempt to turn the operating-nut 5.

Having thus described my invention, what I clāim as new is—

1. An adjustable gage consisting of the combination of the screw-bar 2, the guide-bar 9, the jaw 7, fixed solid to said guide-bar and screw-bar at one end, and both said bars secured in a parallel position by a block, 8, fixed to the other end, the jaw 3, movable on the bar 2, and an operating-nut, 5, graduated on its periphery to turn on said screw-bar and in the opening 4 in said movable jaw, all substantially as described.

2. The combination of the screw-bar 2, the guide-bar 9, the jaw 7, fixed solid to said guide-bar and screw-bar at one end, and both said bars secured in a parallel position by a block, 8, fixed to the other end, the jaw 3, movable on the bar 2, an operating-nut, 5, graduated on its periphery to turn on said screw-bar and in the opening 4 in said movable jaw, and a check-nut, 6, adapted to be turned on said screw-bar 2 against the movable jaw 3, substantially as and for the purpose described.

SANFORD E. STACY.

Witnesses:
T. A. CURTIS,
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