C. B. HUNT.

Taper-Gage.

No. 165,734

Patented July 20, 1875.

Fig. 1.

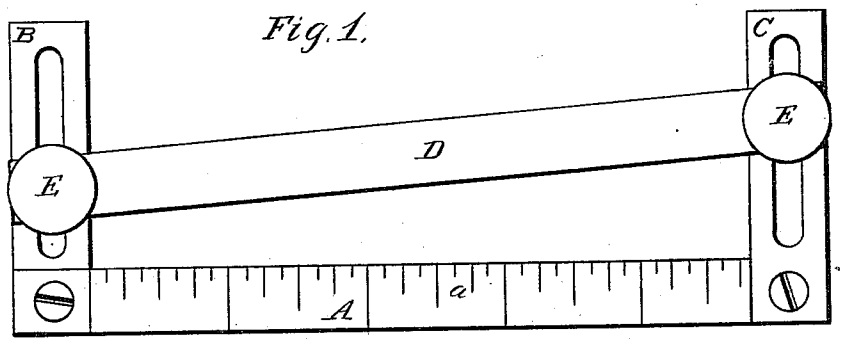


Fig. 2.

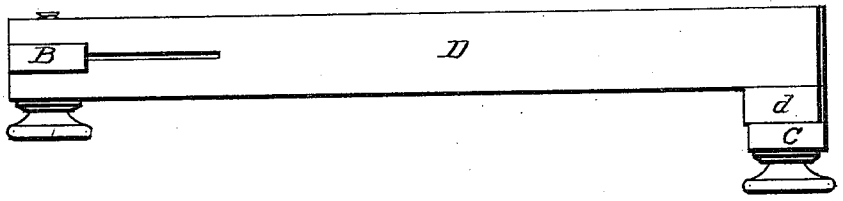


Fig. 3.

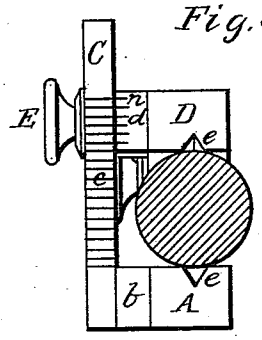
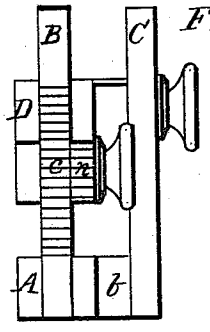


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN TAPER GAGES.

Specification forming part of Letters Patent No. 165,734, dated July 20, 1875; application filed June 26, 1875.

To all whom it may concern:

Be it known that I, CHARLES BROWN HUNT, of Ilion, in the county of Herkimer and State of New York, have invented a new and valuable Improvement in Variable Taper Gages; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my gage. Fig. 2 is a side view of the same, and Figs. 3 and 4 are detail views of the same.

This invention has relation to means for getting the measurements of the taper of the lathe-centers, drill-shanks, taps, reamers, and other tapering articles; and it consists in the construction and novel arrangement of a graduated main bar, having slotted graduated arms and a sliding bar, the ends of which are adjustable and connected with said arms by means of clamp-screws, both main bar and sliding bar being centrally grooved on their opposite inside faces, as hereinafter shown and described.

In the accompanying drawings, the letter A designates the main bar of the gage, which, with the other parts, is preferably made of steel. This bar is graduated on its side face, as shown at *a*, for measuring the length, in respect of which the taper is taken.

B designates a slotted arm extending from that end of the instrument which corresponds to the small end of the tapering device to be measured. This arm extends from the main bar direct, as shown, and its position is at right angles with said bar.

C represents a slotted arm, which extends from an offset, *b*, at the other or larger end of the gage, parallel with the arm B. This arm C is set off from the body of the main bar, in order that there may be room for the introduction of the tapering device between the said main bar and the sliding bar. The arms B and C are graduated on the outer edges transversely, as shown at *c*. D indicates the sliding bar, one end of which slides upon the arm B, the other end being provided with an offset, *d*, which is in sliding contact with the arm C. In this manner the main bar and sliding bar are brought opposite each other, or in the same plane, so that they will fit neatly the opposite sides of a tapering shank or other object. E E designate the clamp-screws, whereby the ends of the sliding bar are connected with the slotted arms, said clamp-screws serving also to fix the adjustment when the sliding bar has been secured up against the side of the object to be measured. The opposite inside faces of the main bar and sliding bar are centrally and longitudinally grooved, as shown at *e*, in order to aid in securing a nice adjustment of the instrument. These grooves are preferably of V form. The sides of the sliding bar may be graduated transversely, as shown at *n*, and indicators or index-points may be attached to these ends to facilitate the reading of the scales.

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

The taper gage, consisting of the graduating main bar A, having at its ends the graduated slotted arms B, and the adjustable sliding bar D connected with said slotted arms by the clamp screws E E, substantially as specified.

In testimony that I claim the above and have hereunto subscribed my name in the presence of two witnesses.

CHARLES BROWN HUNT.

Witnesses:

F. P. MCWENNY,

W. H. ELLIOT.