(No Model.)

A. G. GOLDTHWAIT.

DRILL GAGE.

No. 303,368. Patented Aug. 12, 1884.

Fig. 1.

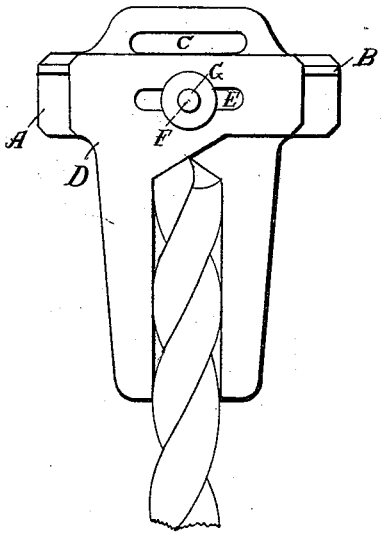


Fig. 2.

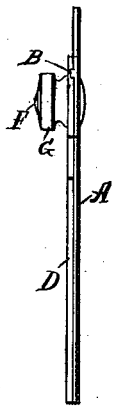


Fig. 3.

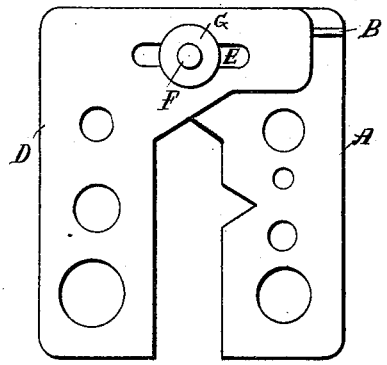
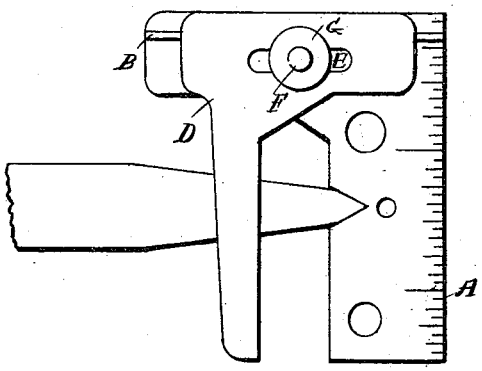


Fig. 4.



WITNESSES

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DRILL-GAGE.

SPECIFICATION forming part of Letters Patent No. 303,368, dated August 12, 1884.

Application filed May 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, ABEL G. GOLDTHWAIT, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Drill-Gages, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in drill-gages; and it has for its objects, first, to provide a convenient and accurate adjustable tool, whereby the bevel or angle of drill-points may be measured and tested during the operation of grinding the same; second, to provide such a tool with a graduated scale for the purpose of taking measurements, and with a series of standard-size holes, which may be used in gaging the diameter of different articles.

In the accompanying drawings, forming a part of this specification, and on which like letters of reference indicate the same or corresponding features, Figure 1 represents a plan view of my improved drill-gage, showing a twist-drill under the test of measurement; Fig. 2, an edge view of the same; Fig. 3, a plan view thereof, showing a slight modification; and Fig. 4 a like view showing another modification.

The letter A designates one of the jaws of my improved gage, which may be termed the "base jaw," the head of which is provided with a bead or rib, B, and an aperture, C, which may be used in hanging up the instrument. The letter D refers to the other jaw, the same being provided at its head with a groove accurately corresponding in size with the bead B, and adapted to fit over and slide to and fro on the same. The heads of these respective jaws are provided with a slot, E, through which is passed the shank of a set-screw, F, that portion of the shank which lies immediately within the slot in the head of the jaw A being squared so as to prevent turning. This screw is provided with a nut, G, having a milled head, so as to present a frictional surface for the fingers. The inner edges of the respective jaws are designed to be parallel with each other, and to terminate at their upper ends at any desired angle, the angle of each being always equal to that of the other. These jaws are capable of relative adjustment through the medium of the slot and set-screw above described, whereby drills of different diameter may be placed between them, and the bevel or angle at which the points are being ground or sharpened accurately ascertained or corrected, so as to agree with the standard angle represented by the gage—say sixty degrees for cutting iron and ninety degrees for cutting brass.

As represented in Fig. 4, it will be observed that the jaw A is somewhat widened, and provided with a graduated scale divided up into inches and the fractions thereof, so as to be used as a rule. This jaw is also provided with a V-shaped notch, which serves as a gage for getting the proper angle to screw-chases or other tools while grinding or setting the same; and of these V-shaped notches there may be any convenient number, and the size and angles may be varied. It is further provided with a number of different-size apertures, for a purpose which will presently appear.

As represented in Fig. 3, both jaws or members of the gage are provided with a series of holes or apertures of standard sizes—say one-quarter, one-half, and five-eighths inch in diameter—the object of which is to provide a means of testing the size of cylindrical bodies.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a drill-gage, the combination of the movable jaws, having opposite edges parallel for a portion of their length and crossing each other at or near one end, and means to maintain the parallelism thereof and to set them at different relative distances apart.

2. In a drill-gage, the combination of two jaws having opposite edges parallel for a portion of their length and crossing each other at or near one end, the one provided with a bead and slot and the other with a corresponding groove and slot, and a set-screw to bind them at different distances apart.

3. In a drill-gage, the combination, with two jaws, the one provided with a graduated

scale, a V-shaped notch, and a plurality of different-sized apertures, a bead, and a slot, and the other with a corresponding groove and slot, the said jaws being adjustably held together by a set-screw, and provided with opposite edges parallel for a portion of their length and crossing each other at or near one end.

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

ABEL G. GOLDTHWAIT.

Witnesses:
C. H. ZOLHURST,
EDWARD B. GODBEE.