

A. C. TRAFTON.
Drill-Gages.

No. 139,487.

Patented June 3, 1873.

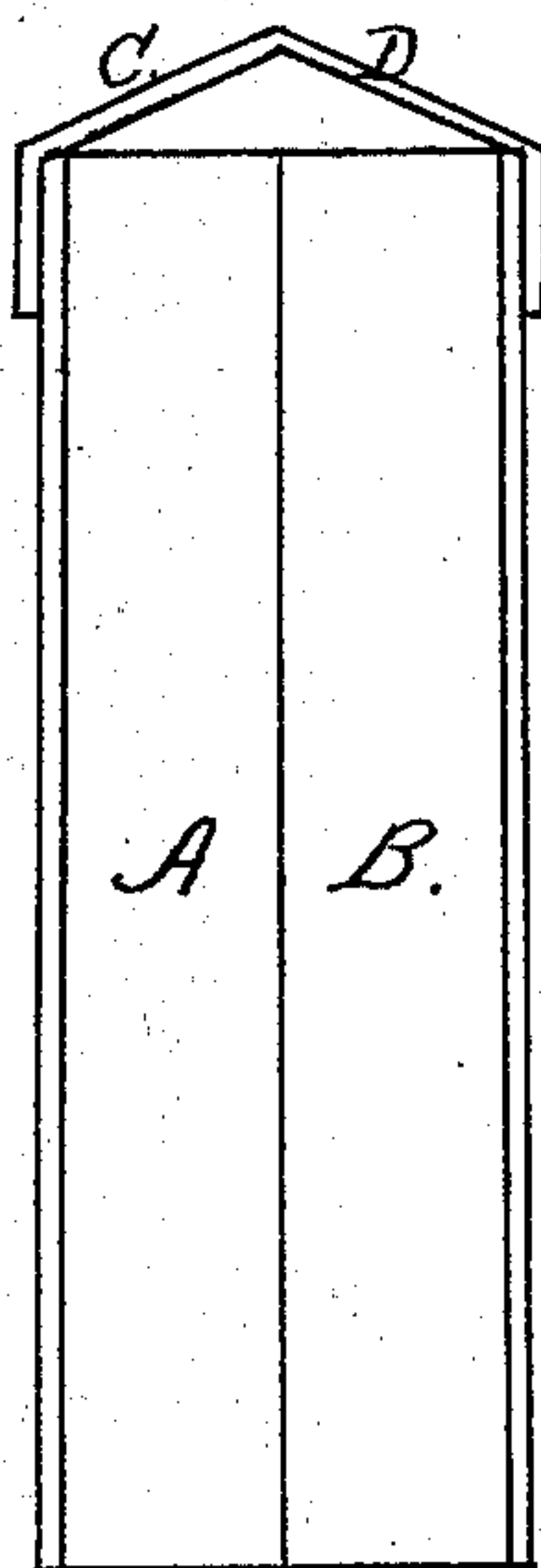
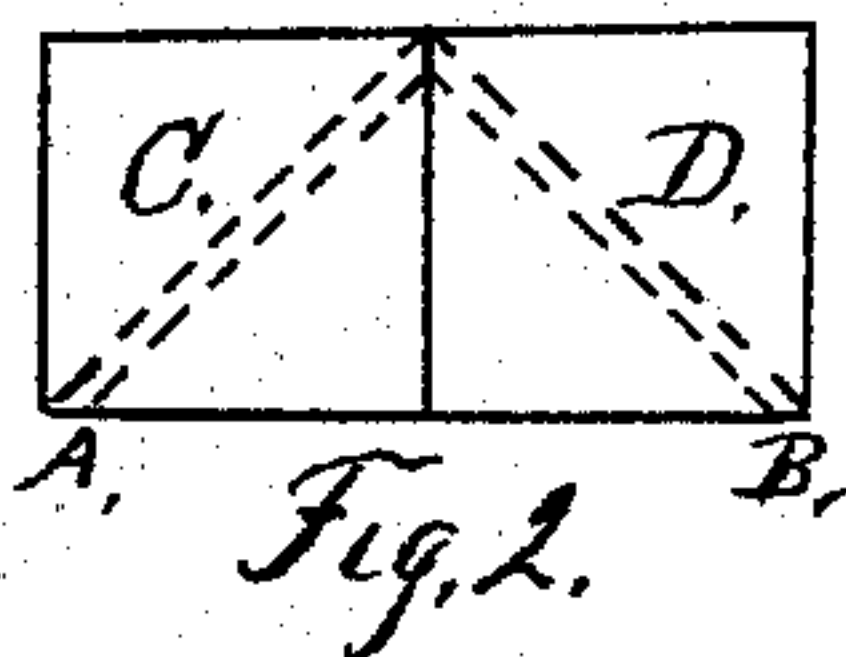


Fig. 1.

Witnesses
Chas. John Smith
Thos. W. Condit

Inventor
Alvah C. Trafton,
by his atty,
Joseph B. Gardner

UNITED STATES PATENT OFFICE.

ALVAH C. TRAFTON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN DRILL-GAGES.

Specification forming part of Letters Patent No. **139,487**, dated June 3, 1873; application filed March 10, 1873.

To all whom it may concern:

Be it known that I, ALVAH C. TRAFTON, of Worcester, in the county of Worcester and the Commonwealth of Massachusetts, have invented certain Improvements in Drill-Gages, of which the following is a specification:

This invention relates to the production, as a new article of manufacture, of an improved gage for assisting mechanics in correctly grinding twist-drills.

In grinding twist-drills great difficulty is experienced in obtaining equally-beveled sides at the point, from the fact that it is necessary that the proper angle shall be given to the drill at the point, and that the sides shall be equally beveled, in order that the drill may run truly. It is almost impossible in practice to grind drills correctly by the eye alone, and even if the bevels are correctly obtained and the point is central, the angle at the point is often either too obtuse or too acute, and consequently the drill will not do its work as well and truly as if the same were ground correctly. In other cases, the bevels on the sides are frequently not alike, and the point is not central, in which case the drill will not cut properly, and will run to one side. From the fact of these difficulties constantly arising, few machinists are able to grind their own drills properly, and, in consequence, a considerable prejudice has arisen against this tool, and in many cases machinists have abandoned the use of the same, on account of the great cost, arising from the constant breaking of drills, owing to improper grinding and the difficulty and delay experienced in replacing the same in many parts of the country.

I am aware that attempts have been made to produce gages to assist mechanics in grinding drills; but in all cases such gages have been constructed with movable and adjustable guides, regulated by screws or other means, such parts having to be shifted for each size of drill ground; and, as a consequence, considerable experience is required before a mechanic can become so acquainted with the device as to use the same correctly.

The object of my invention is to remedy these evils by producing a drill-gage the parts of which are all stationary, and so arranged that a drill of any size below and including

that of the maximum width of the centering-trough may be centered and gaged by the same instrument with great accuracy without necessitating any experience on the part of the workman in the use of the instrument.

But that my invention may be fully understood, I will describe the same in detail by aid of the accompanying drawings.

Figure 1 represents a plan, and Fig. 2 an end view of my improved drill-gage.

A B are two inclined sides, arranged at right angles one to the other, and forming a trough. These inclined sides, at the point where they come together, are firmly soldered or otherwise connected. C D are two plates, forming the gage. These plates C D are, by preference, arranged at an angle of one hundred and twenty degrees, (but this angle may be varied according to the requirements of the machinist,) and at E are firmly connected together by soldering or other suitable means, and at F they are provided with extensions which are similarly affixed to the sides A B of the trough. The plates C D are so affixed that the bevel of their respective faces shall be equal, and the line of their juncture F shall be perpendicular to and central with the line of the point of juncture of the plates A B.

By thus constructing drill-gages I obtain a permanent gage, and am able, by means of the trough A B, to center any size of drill, and, by means of the end gage, C D, to insure the proper angle and equality of bevel, together with a perfectly central point. It will also be found that the most inexperienced hands can use this gage with ease and accuracy.

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

As a new article of manufacture, a drill-gage, constructed with a centering-trough, composed of two plates, A B, connected together at right angles, and a bevel-regulating gage, composed of two plates, C D, connected together and permanently affixed to the centering-trough A B, substantially as shown, and for the purposes described.

ALVAH C. TRAFTON.

Witnesses:

JOSEPH B. GARDINER.

NATHAN B. GOODNOW.