

(No Model.)

2 Sheets—Sheet 1.

J. R. TOPPING.
GAGING AND SCRIBING TOOL.

No. 565,579.

Patented Aug. 11, 1896.

Fig. 2

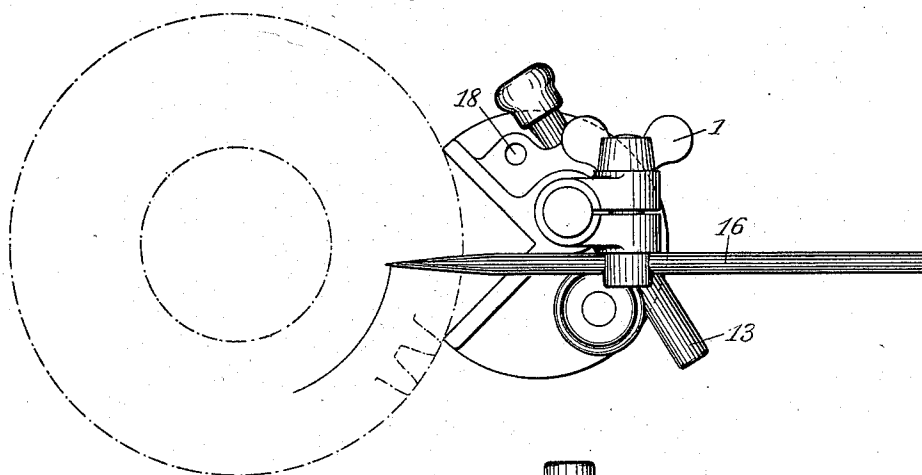
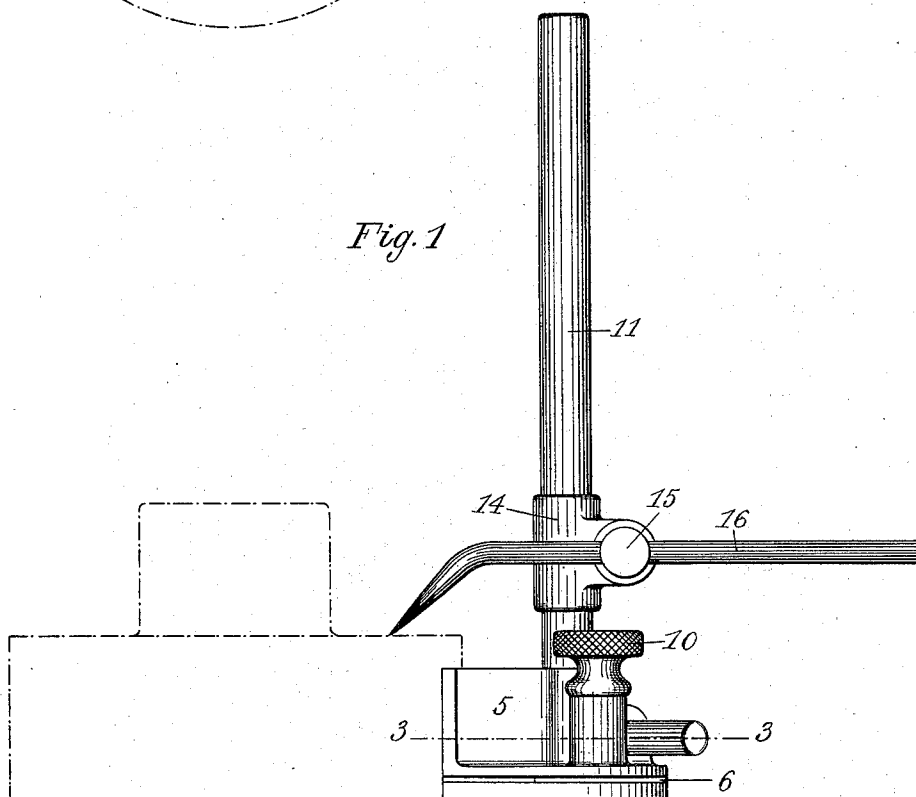


Fig. 1



Witnesses:

H. Mallon

Edward E. Claussen

Inventor:

James R. Topping
By his Attorney
W. H. Bonick

(No Model.)

2 Sheets—Sheet 2.

J. R. TOPPING.
GAGING AND SCRIBING TOOL.

No. 565,579.

Patented Aug. 11, 1896.

Fig. 3

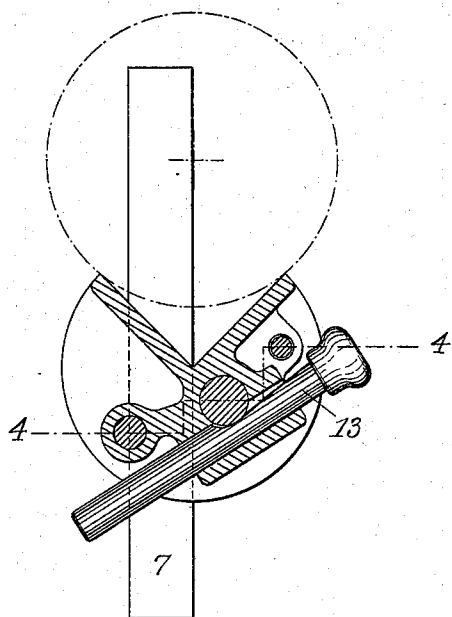
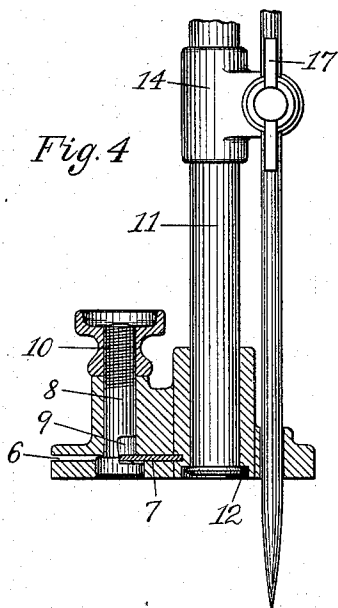


Fig. 4



Witnesses:

H. Mallner.

Edward E. Claussen

Inventor:

James R. Topping.
By his Attorney
W. H. Bonica.

UNITED STATES PATENT OFFICE.

JAMES R. TOPPING, OF HARTFORD, CONNECTICUT.

GAGING AND SCRIBING TOOL.

SPECIFICATION forming part of Letters Patent No. 565,579, dated August 11, 1896.

Application filed July 6, 1894. Serial No. 516,727. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. TOPPING, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Gaging and Scribing Tools, of which the following is a full, clear, and exact specification.

This invention is an improved tool for performing many of the ordinary functions of surface gaging and scribing instruments. By its improved construction and arrangement it is also adapted to perform other functions not usually within the scope of this kind of a tool.

Figure 1 of the drawings is a side view, and Fig. 2 is a plan view, of my improved tool, showing in connection therewith the dot-and-dash outline of a piece of work and illustrating one of the important functions of this tool. Fig. 3 is a plan view in section on the line 3 3 of Fig. 1, showing the mode of fastening the vertical standard and illustrating the tool, in conjunction with the dot-and-dash circle, in its capacity as a center-gage. Fig. 4 is side view, partly in section, taken on the line 4 4 of Fig. 3. That line and section are taken in the three different planes of the bolt, the standard, and the scriber in order to show their construction and relation clearly.

The base 5 of the tool is provided with suitable hubs to receive its various appurtenances and is provided with a V-shaped recess of substantially ninety degrees opening, as shown. The walls of this recess are preferably carried by means of flanged extensions to a considerable height from the base, as shown in the drawings, in order to afford ample gaging-surfaces. A slot 6 is cut in the base to receive the blade 7 in such a position that one edge of the blade passes through the apex of the V-recess and bisects the angular opening thereof. The blade is adjustably clamped at any desired position in the slot by means of the bolt 8, provided with the recess 9, the beveled bottom of which forces the blade against the bottom of its slot as the bolt is drawn endwise by its nut 10. By loosening that nut and pushing the bolt back slightly the blade is loosened for adjustment.

The standard 11 is fitted to slide freely in its hole in the base 5 and is provided at its

lower end with a marking cutter or disk 12. A recess is made in the lower surface of the base 5 to receive the cutter, in order that it may be drawn in flush with that surface. The standard is capable of being clamped at any position in the base by means of the pin 13, which passes through the base transversely to the standard, and is so arranged that the tapering bottom of a recess in the side of the pin may be forced against the side of the standard as the pin is moved endwise. The ends of the pin are preferably made to project beyond the area of the base, as shown in Fig. 2, so that those ends may be tapped upon the bench or upon any convenient block for the purpose of tightening or loosening the standard. The tool is thus adapted to be used as a carpenter's gage.

The sleeve 14 is fitted to slide upon the standard and is split, as shown in Fig. 2. A bolt 15 passes through the sleeve transversely to the standard 11, and has a transverse hole through its head end in which is fitted the scriber 16, the hole being so located with reference to the shoulder of the bolt as to allow the scriber to bear against the sleeve. Thus the scriber is clamped in the bolt and the sleeve is tightened upon the standard by tightening the thumb-nut 17.

A hole 18 is located in the base at a distance from the center of the standard equal to that of the scriber when in its vertical position, as shown in Fig. 4, wherein the tool is shown in its capacity as a depth-gage, the adjustment for depth being made by slipping the scriber in its bolt or slipping the bolt upon the standard.

In workshop practice it is often desirable to scribe concentric circles or arcs of circles upon the face of circular work, such as gear-blanks and cams, which have raised hubs or have their centers bored out so as to afford no pivotal support for dividers or compasses. Figs. 1 and 2 represent my improved tool as adapted to perform such work, the scriber being adjusted to suit the location of the mark to be made.

The tool is also adapted as a center-gage, as shown in Fig. 3, by the insertion of the blade 7.

I am aware that one form of surface-gage is now made having an angular recess

roughly cast in its base somewhat similar in appearance to that shown herein; but that recess is avowedly for the purpose of enabling the scriber to fold down close against the standard in order to enable the tool to be packed in its closest compass. As the angular walls of this recess in the tool alluded to are only roughly cast, it will not serve the purpose of my present device, the walls of which are accurately planed or milled out in planes at right angles to the base and substantially at right angles to each other.

The improved form of the base of this combination-tool, as herein shown, is such as to enable it to receive the several members and to hold them firmly to afford generous gaging-surfaces at the bottom and in the angular recess thereof and at the same time to make the base very light for convenience and ease of handling. This excellence is secured by means of the flanged construction shown, whereby the greatest lightness consistent

with rigidity and adaptability to its purposes are secured.

I claim as my invention—

The herein-described base for a combination surface-gage and center-square, having upward flanges which form the walls of a V-shaped recess, provided with a slot parallel with the bottom surface of the base, adapted to receive and locate a blade so that its working edge shall pass through the internal apex of the V-walls and bisect the angular opening thereof, the base being also provided with an upwardly-projecting hub located on one side of the blade, whereby the standard and the blade may pass by each other, with means substantially as described for clamping the blade and the standard adjustably to their respective places.

JAS. R. TOPPING.

Witnesses:

W. W. TOPPING,
W. H. HONISS.