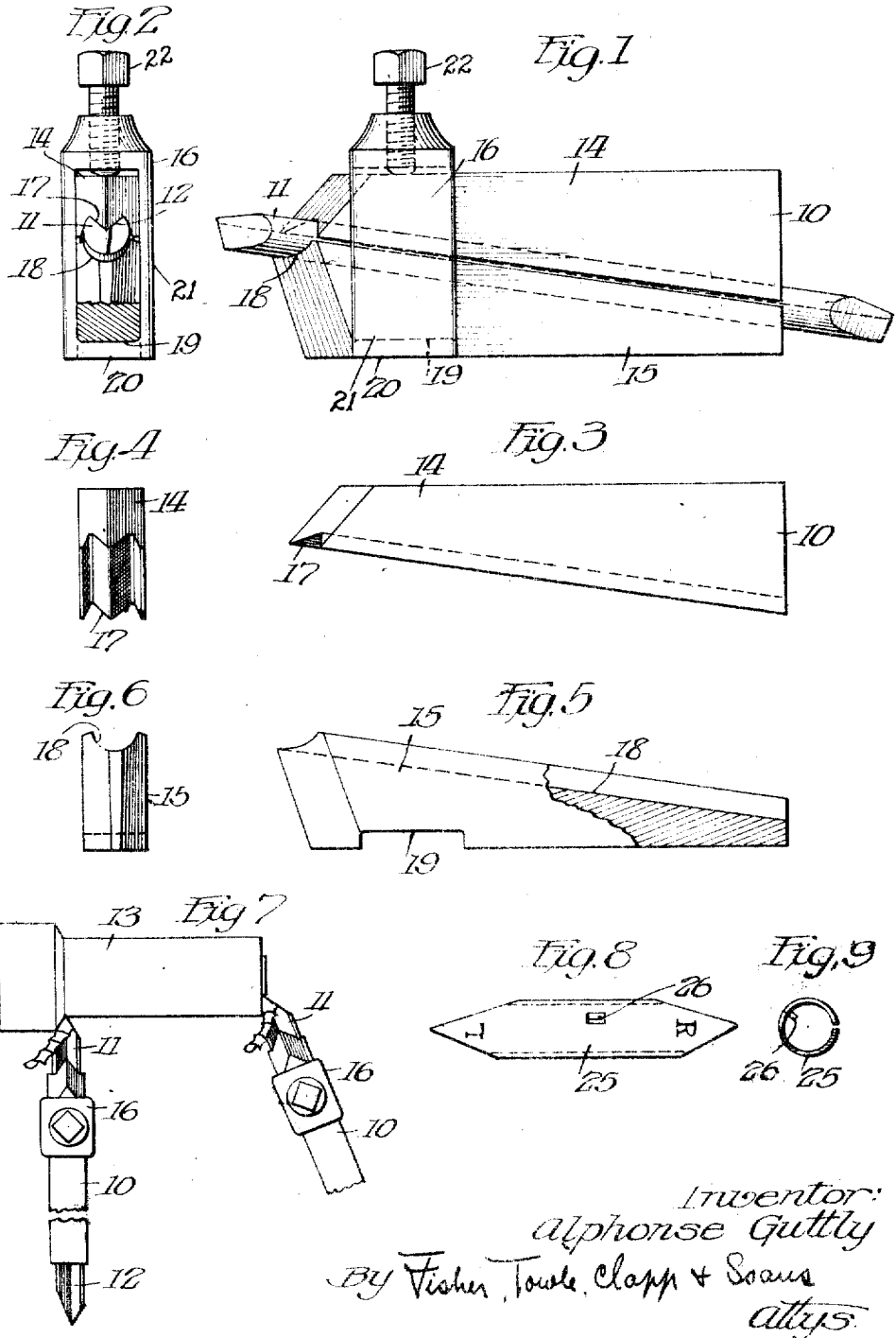


A. GUTTLY.
CUTTING TOOL AND HOLDER.
APPLICATION FILED OCT. 22, 1921.

1,415,237.

Patented May 9, 1922.



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UNITED STATES PATENT OFFICE.

ALPHONSE GUTTLY, OF WISCONSIN RAPIDS, WISCONSIN.

CUTTING TOOL AND HOLDER.

1,415,237.

Specification of Letters Patent.

Patented May 9, 1922.

Application filed October 22, 1921. Serial No. 509,547.

To all whom it may concern:

Be it known that I, ALPHONSE GUTTLY, a citizen of Switzerland, residing at Wisconsin Rapids, in the county of Wood and State of Wisconsin, have invented certain new and useful Improvements in Cutting Tools and Holders, of which the following is a specification.

This invention relates to improvements in tools for turning and planing metals, wood and the like but more particularly to such as are adapted for use in lathes, planers, shapers and other machines of a similar nature.

The principal objects of my invention are to insure the accurate positioning of the tool relative to the work and the maintenance of the tool in this position during the cutting operation, to facilitate the sharpening of the tool, to provide an improved cutting edge, to permit positioning of the tool without the exercise of skill, to provide an improved bevel gauge, and in general to provide a new and improved cutting device.

The many other objects and advantages of my invention will be better understood by reference to the following specification when considered in connection with the accompanying drawing, illustrating a selected embodiment thereof, in which:—

Fig. 1 is a side elevation of my invention complete.

Fig. 2 is the same as Fig. 1, front elevation.

Fig. 3 is a detail side elevation of the upper holder member.

Fig. 4 is the same as Fig. 3, front elevation.

Fig. 5 is a detail side elevation of the lower holder member.

Fig. 6 is the same as Fig. 5, front elevation.

Fig. 7 is a plan view illustrating the method of using my improved tool and holder, and Figs. 8 and 9 are respectively side and end elevations of a gauge for use in sharpening my improved cutting tool.

Referring to the drawing, the device comprises a holder 10 and a cutting tool 11. The cutting tool is preferably substantially cylindrical in form and provided with a straight groove 12 running longitudinally thereof from end to end. In the tool illustrated in the drawing this groove is substantially V-shaped in cross section but any other suitable form might be adopted. For con-

venience in use the tool 11 has been provided with a cutting edge at each of its ends in order that it may be reversible. The forward edge is adapted to cut upon the right side or face of the work and the rear end performs a similar operation on the left side or face. In Fig. 7 of the drawing, the tool 11 is illustrated in two different positions relative to the work 13. In each of these positions the tool is operating on the right. Similar positions on the left may be obtained by inverting the tool in the holder.

The tool holder comprises an upper member 14, a lower member 15, and a clamping member 16. The upper member 14 is provided with a tongue 17 extending longitudinally on its under face to fit within the groove 12 in the tool 11, the depressions on the sides of the tongue forming grooves to fit the upper portion of the tool. The forward edges of the upper member are preferably beveled and inclined rearwardly to prevent interference of the holder with the operation of the tool.

The lower member 15 is provided on its upper face with a longitudinal groove 18 to fit the under face of the tool 11. The forward end of the member 15 is preferably beveled and receding for the purpose described in connection with the corresponding end of the upper member. A transverse groove 19 is preferably cut in the under face of the lower member to receive and fit the cross piece 20 of the clamping member 16.

The clamping member 16 comprises a band or strap 21 and a binding screw 22. The strap 21 envelops and fits closely about the upper and lower members and prevents relative lateral movement thereof. The binding screw acts upon the upper face of the upper holder member to cause the upper and lower members to tightly grip the tool 11 and to prevent relative longitudinal movement of these members. The cross piece 20 of the clamp 16 preferably fits within a groove 19 in the under face of the member 15 so that its under face is flush with the base of this member.

The groove 12 not only positions the tool within the holder but provides the proper cutting lip throughout the entire length of the tool without the grinding of special lip surfaces. This greatly simplifies the grinding process and eliminates reforcing. In order to further simplify the grinding or

sharpening operation, I have provided a simple form of bevel gauge 25 which can be slipped over the forward end of the tool with the positioning pin or lug 26 in the groove 12. This gauge comprises a metal tube fitting the outside diameter of the tool and having its ends ground to conform to the proper bevel facing of the tool. The ends are designated "R" and "L" to identify the right and left cutting ends of the tool. The positioning pin or lug 26 in the present embodiment is stamped from the body of the tube though it may be attached thereto or formed in any other suitable manner.

15 After the grinding of the tool, the gauge will indicate at once whether or not it has been ground to the proper bevel.

It will be seen that my improved holder enables the tool to be quickly and accurately positioned and insures retention of the tool in this position throughout the operation. The form of the tool with the straight longitudinal groove greatly facilitates the grinding or sharpening operation and eliminates the repositioning of the tool within the holder after each reshaping which is necessary with cylindrical tools having a spiral groove. My device is simple and strong in construction and can be quickly and easily assembled without the exercise of any skill.

I am aware that changes may be made in the form and arrangement of the various parts without departing from the spirit of my invention and I reserve the right to make all such as fairly fall within the scope of the following claims.

I claim as my invention:

1. In a device of the class described, a substantially round cutting tool provided with a straight groove extending longitudinally thereof, and a holder fitting about said tool and having a projection fitting within said groove.

2. In a device of the class described, a substantially round cutting tool provided with a straight groove extending longitudinally thereof from end to end, and a holder for said tool comprising upper and lower

members shaped to fit said tool, one of said members being provided with a projection fitting within said groove to position said tool relative to said holder.

3. In a device of the class described, a round cutting tool provided with a straight substantially V-shaped groove extending longitudinally thereof from end to end, and a holder for said tool comprising upper and lower members shaped to fit said tool, and a clamp fitting about said members.

4. In a device of the class described, a cylindrical cutting tool having a straight longitudinal groove extending from end to end thereof and forming a permanent cutting lip, and a tool holder comprising upper and lower members channeled to fit said tool, one of said members having a projection fitting within said groove, and a clamp fitting about said holder.

5. In a device of the class described, a cylindrical cutting tool having a straight longitudinal groove extending from end to end thereof, and a tool holder fitting about said tool and having a longitudinal tongue fitting within said groove.

6. In a device of the class described, a cylindrical cutting tool having a straight longitudinal groove extending from end to end thereof, and a tool holder comprising upper and lower members channeled to fit said tool, and a clamping member fitting about said holder and positioned relative to one of said members.

7. A metal cutting tool comprising a substantially cylindrical body having one of its ends beveled, and provided with a straight groove extending longitudinally thereof from said beveled end, one edge of said groove forming a cutting lip.

8. A metal cutting tool, comprising a cylindrical body portion having one end beveled on opposite sides and being provided with a straight substantially V-shaped groove extending longitudinally thereof from end to end, one edge of said groove forming with the adjacent beveled face of the tool a cutting lip.

ALPHONSE GUTTLY.