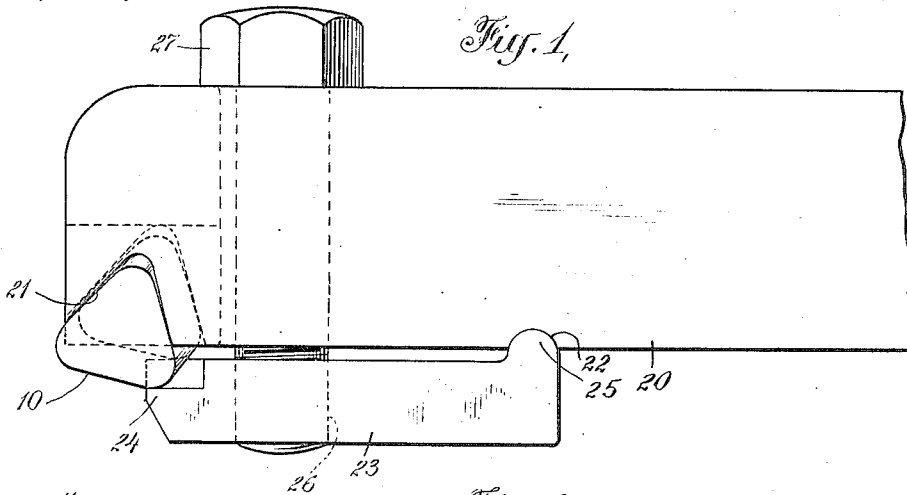
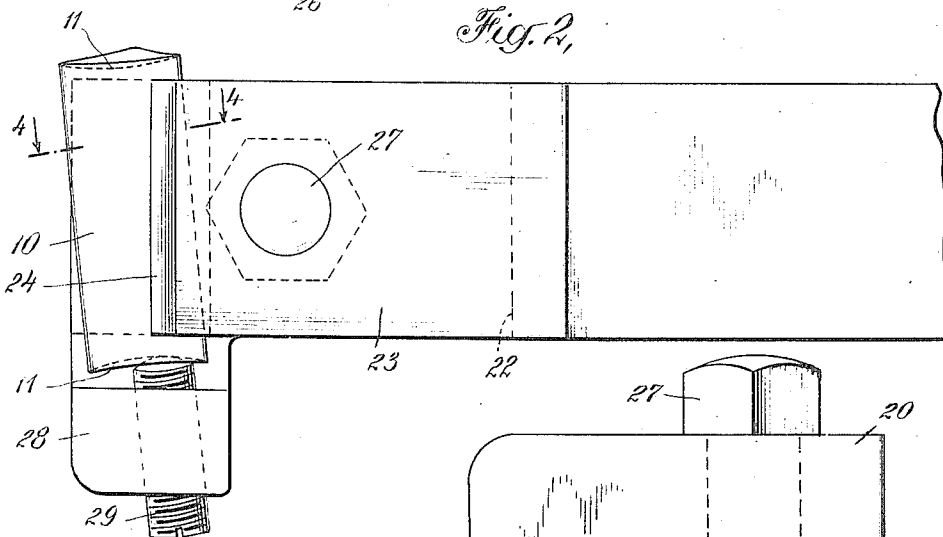
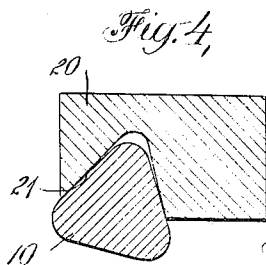
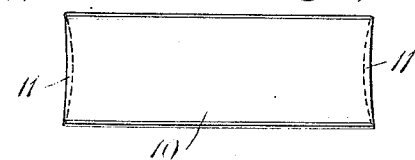
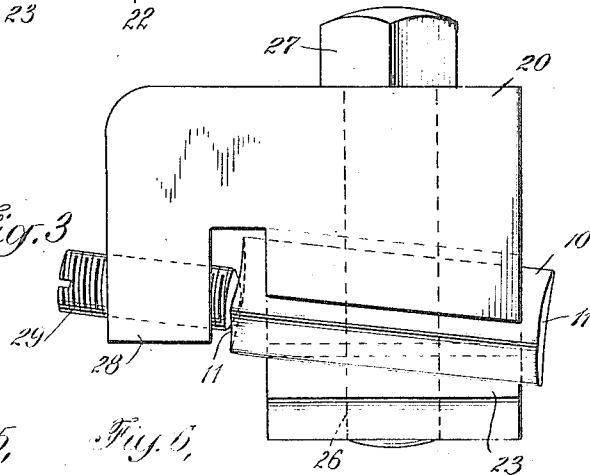


W. B. BRONANDER.
CUTTING TOOL.
APPLICATION FILED APR. 5, 1919.

1,397,357.

Patented Nov. 15, 1921.



Inventor
Wilhelm B. Bronander
By his Attorney
E. W. Marshall

UNITED STATES PATENT OFFICE.

WILHELM B. BRONANDER, OF MONTCLAIR, NEW JERSEY.

CUTTING-TOOL.

1,397,357.

Specification of Letters Patent.

Patented Nov. 15, 1921.

Application filed April 5, 1919. Serial No. 287,761.

To all whom it may concern:

Be it known that I, WILHELM B. BRONANDER, a citizen of the United States of America, and a resident of Montclair, Essex county, and State of New Jersey, have invented certain new and useful Improvements in Cutting-Tools, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to new and useful improvements in cutting tools, such as are used in lathes, shapers, planers, and the like, and its object is to provide an inexpensive structure of which the cutting bit is made of a high speed steel such as stellite, and for which a holding device is provided which is extremely simple and effective.

Another object is to provide a bit of substantially triangular cross section which has cutting points at all six of its corners, together with a holder into which the bit fits and is clamped.

More specifically, its object is to so construct the bit and holder that the bit will become more tightly held while in use rather than having the effect of working loose, and to provide an adjustable support for the end thrust of the bit.

In order that my invention may be thoroughly understood I will now proceed to describe the same in the following specification, and will then point out the novel features thereof in appended claim.

Referring to the drawings:

Figure 1 is a plan view of a cutting tool made according to and embodying this invention.

Fig. 2 is a side elevation of the same device.

Fig. 3 is an end elevation of the tool shown in the preceding figures.

Fig. 4 is a sectional plan view of parts of the tool, the section being taken on the line 4—4 of Fig. 2.

Fig. 5 is a longitudinal elevation and

Fig. 6 an end view of the cutting bit.

Like characters of reference designate corresponding parts in all the figures.

10 designates a cutting bit, the cross-section of which is in the form of an equilateral triangle, in this case with its edges rounded. This is preferably made of stellite or similar

metal of the so-called high speed steel class. As shown, its ends are dished or concave as shown at 11. As a result of this shape all six corners of the bit are formed into cutting edges.

20 is a shank of suitable metal at one end of which is a V-groove 21 inclined both longitudinally and laterally to a line normal to the base of the shank. The sides of this groove are preferably disposed at an angle to each other slightly less than 60° or to the angle between adjacent sides of the bit. Back of this V-groove is another groove 22 in the side of the shank. 23 is a clamp having a jaw 24 at one end adapted to engage the bit when it is inserted in the groove 21, a projecting rib 25 at its other end which fits the groove 22, and an intermediate threaded hole 26. 27 is a bolt which passes through a clearance hole in the shank into this threaded hole 26.

28 is a lug integral with the shank and holding an adjusting screw 29 in the center of and in alinement with the bit.

In use the bit 10 is placed in the V-groove 21 with its lower end resting upon the adjusting screw 29. It is then forced into the V-groove by the clamp 23 tightened by bolt 27. The shapes of the bit and the V-groove are such that a very secure engagement of the bit is attained. When the tool is used its end thrust is taken by the screw 29 and the lateral pressure upon it forces it farther into the V-groove, thereby causing it to be held even more tightly.

It is obvious that the bit may be turned axially to bring either one of three cutting edges into operative position and that it may be turned end for end to make three other cutting edges available.

What I claim is:

A cutting tool comprising a bit of triangular cross-section, a holder therefor constructed with a V-groove, adapted to receive the bit, the surfaces of said groove diverging at a less angle than do the surfaces of the bit, a support for the lower end of the bit, and a clamp for forcing the bit into said groove.

In witness whereof, I have hereunto set my hand this 4th day of April, 1919.

WILHELM B. BRONANDER.