No. 740,506. PATENTED OCT. 6, 1903.

V. WINQUIST.

BIT FOR CARVING MACHINES.

APPLICATION FILED NOV. 22, 1902.

NO MODEL.

Fig. 1.

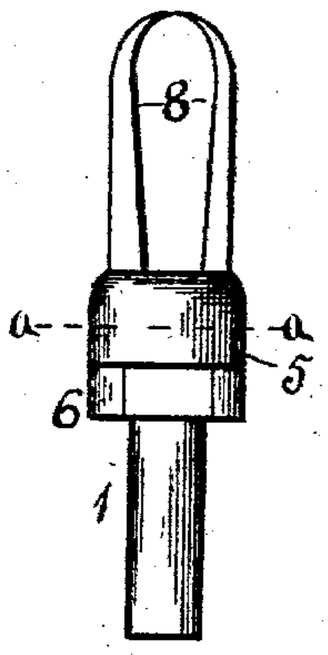


Fig. 2.

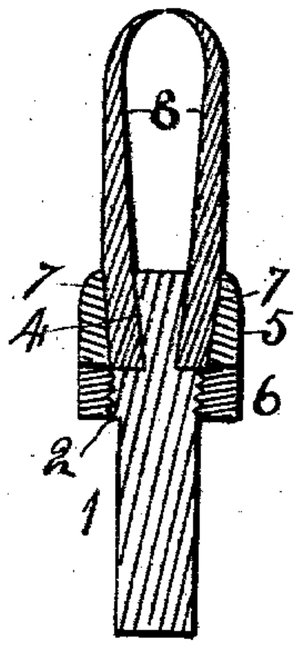


Fig. 3.

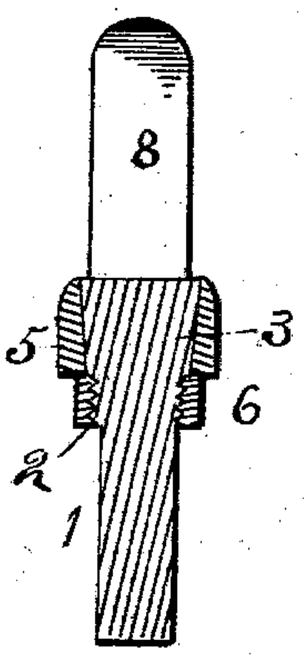


Fig. 4.

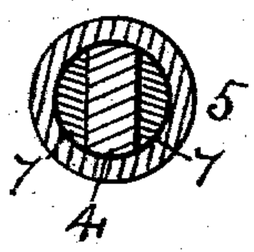
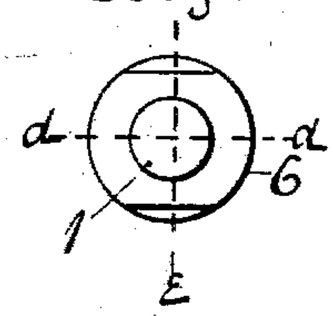


Fig. 5.



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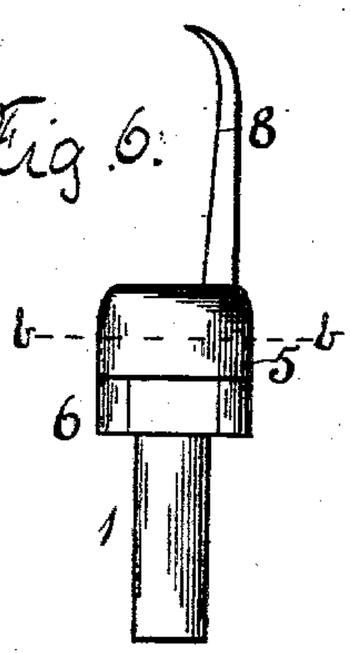
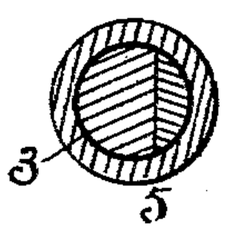


Fig. 9.



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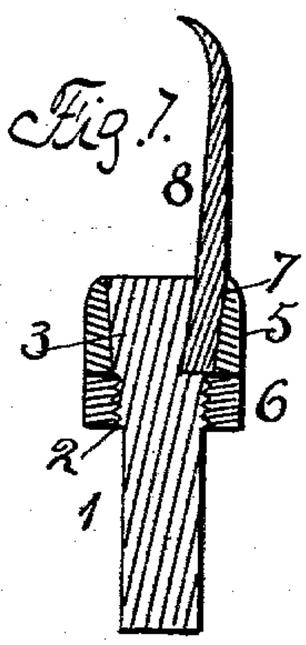

Fig. 10.

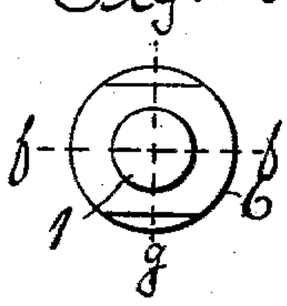

Fig. 8.

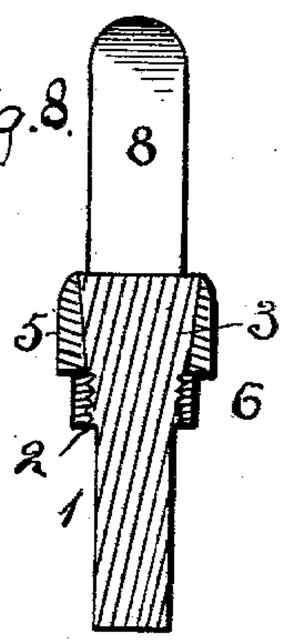

Fig. 11.

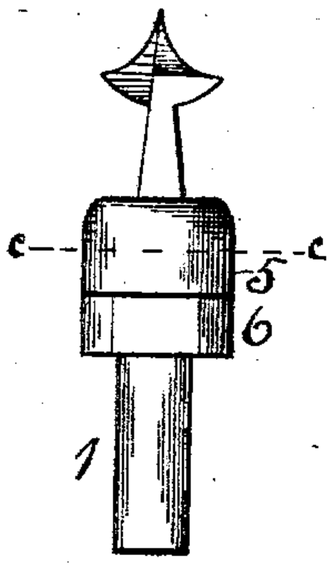

Fig. 14.

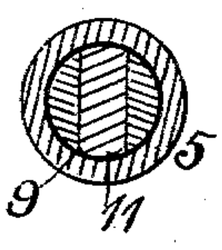

Fig. 12.

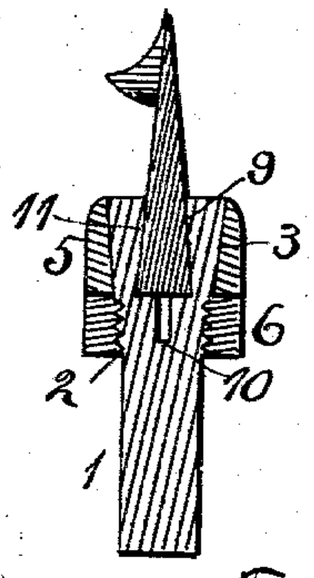

Fig. 15.

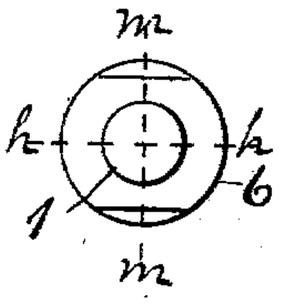

Fig. 13.

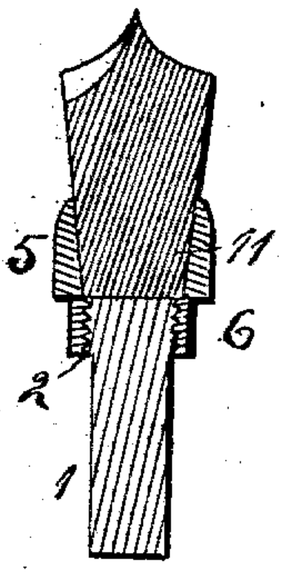

Fig 16

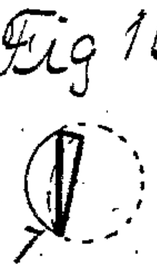

Fig 17

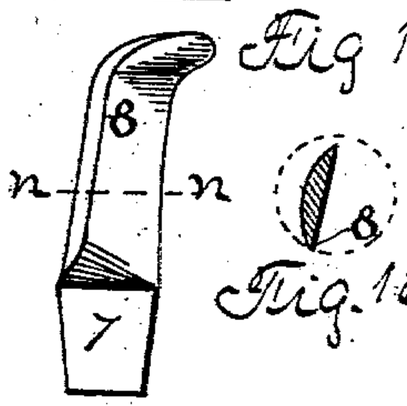

Fig. 18.

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Giles L Wiley

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By A. O. Bechel
Atty.

No. 740,506. Patented October 6, 1903.

UNITED STATES PATENT OFFICE.

VICTOR WINQUIST, OF ROCKFORD, ILLINOIS, ASSIGNOR OF ONE-HALF TO CLAUS G. PETERSON, OF ROCKFORD, ILLINOIS.

BIT FOR CARVING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 740,506, dated October 6, 1903.

Application filed November 22, 1902. Serial No. 132,491. (No model.)

To all whom it may concern:

Be it known that I, VICTOR WINQUIST, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Carving-Machine Bits and Sockets Therefor, of which the following is a specification.

The object of this invention is to construct a bit for carving-machines in which the cutting portion of the bit is twisted with relation to its shank or holding end in order that clearance may be had.

The further object of this invention is to provide a holder for the bits.

In the accompanying drawings, Figure 1 is an elevation of a double cutting-bit. Fig. 2 is a lengthwise section on dotted line *d*, Fig. 5. Fig. 3 is a lengthwise section on dotted line *e*, Fig. 5. Fig. 4 is a tranverse section on dotted line *a*, Fig. 1. Fig. 5 is an end view of the cutter shown at Fig. 1 as seen looking at the shank. Fig. 6 is an elevation of a single cutter. Fig. 7 is a lengthwise section on dotted line *f*, Fig. 10. Fig. 8 is a lengthwise section on dotted line *g*, Fig. 10. Fig. 9 is a transverse section on dotted line *b*, Fig. 6. Fig. 10 is an end view of the cutter shown at Fig. 6 as seen looking at the shank. Fig. 11 is an elevation of an ogee cutter. Fig. 12 is a lengthwise section on dotted line *h*, Fig 15. Fig. 13 is a lengthwise section on dotted line *m*, Fig. 15. Fig. 14 is a lengthwise section on dotted line *e*, Fig. 11. Fig. 15 is an end view of the cutter shown at Fig. 11 as seen looking at the shank. Fig. 16 is an end view of one of the cutting-bits. Fig. 17 is a perspective view of one of the cutting-bits. Fig. 18 is a transverse section on dotted line *n*, Fig. 17.

My invention relates to an improvement in the construction of bit cutters and sockets therefor, wherein the socket-spindle is provided with an inverted cone-shaped head, in which recesses disposed longitudinally of the spindle leave an inverted wedge-shaped center. Cutters having wedge-shanks are seated in said recesses and securely held in place by a retaining-sleeve, which surrounds said conical head and is held in position by a nut which engages threads upon the socket-spindle.

The shank for holding the cutter-bits comprises a cylindrical portion 1, a screw-threaded portion 2, and a cone-shaped end 3. The cone-shaped end of the shank for holding the double cutting-bits has two of its sides cut away to form lower shoulders, upon which the shanks of the cutting-tools rest, and leaving a wedge-shaped center 4. A collar 5 has its inner surface fitted to the cone-shaped upper end of the shank and a nut 6 engaging the screw-threaded section.

The cutting-bits are the duplicate of each other, each comprising a holding-section 7, fitted to fill the cut-away portion of one side of the cone-shaped upper end of the shank, and a cutting edge 8, having a partial twist with relation to the holding-section, as shown at Figs. 16, 17, and 18.

The cutting-bits are placed in position in connection with the upper end of the shank portion and the collar slipped over them and the nut turned up against the collar, thereby clamping the bits firmly in position.

The connection for holding a single bit has but one side of the upper cone-shaped end of the shank cut away to receive a single bit.

By making the single and double bits with the cutting portion twisted a clearance is had, as shown at Figs. 16 and 18.

I claim as my invention—

1. The combination of a bit-socket comprising a shank having an inverted cone-shaped head, oppositely-disposed recesses in said head, leaving an inverted wedge-shaped portion forming the end thereof, a flaring sleeve surrounding said head and means to hold said sleeve in place, with cutting-tools having their shanks, corresponding in shape to the cut-away portions of the head, which enter said recesses and are retained therein by said sleeve.

2. The combination of a bit-socket and shank having an inverted cone-shaped head, oppositely-disposed recesses in said head having their bases substantially at right angles to the axis of said shank and sloping sides which leave between them an inverted wedge-shaped portion forming the end of said head, a flaring annular sleeve surrounding said head, means to hold said sleeve in place, and cutting-tools having wedge-shaped shanks

which enter said recesses and rest upon the bases thereof while the body of the shank fills out and corresponds with the rounded contour of the head and is engaged by said sleeve, whereby it is retained in position, substantially as described.

3. The combination of a bit-socket comprising a shank having an inverted cone-shaped head, said head being recessed, the base of the recess extending at substantially right angles to the axis of the shank and a side wall of the recess sloping to provide an inverted wedge-shaped portion forming the end of the head, a flaring annular sleeve surrounding said head, and means for holding the sleeve in place, with a cutting-tool having its shank corresponding in shape with and inserted into the recessed portion of the head, substantially as described.

VICTOR WINQUIST.

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