

No. 852,745.

PATENTED MAY 7, 1907

N. STAUB.
BORING BIT.

APPLICATION FILED JULY 31, 1905.

Fig. 1.

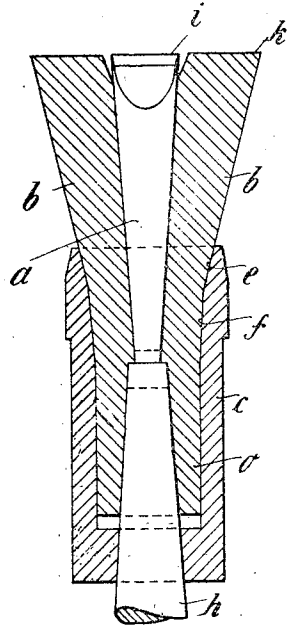


Fig. 2.

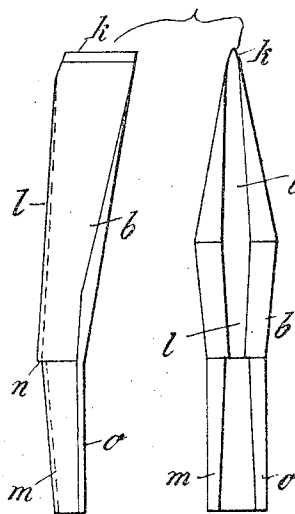


Fig. 3.

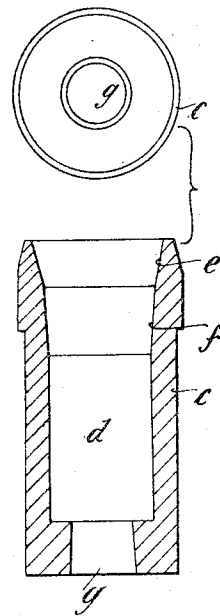


Fig. 7.

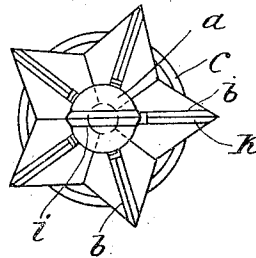


Fig. 4.

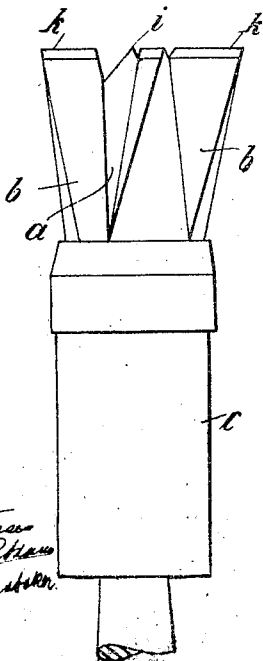


Fig. 5.

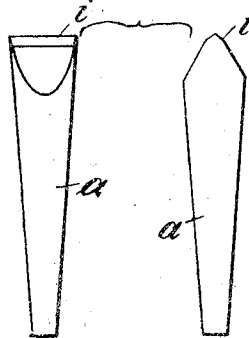
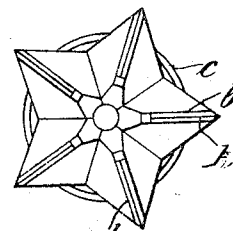


Fig. 6.



Witness
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UNITED STATES PATENT OFFICE.

NICOLAUS STAUB, OF SCHIFFWEILER, GERMANY.

BORING-BIT.

No 852,745.

Specification of Letters Patent.

Patented May 7, 1907.

Application filed July 31, 1905. Serial No. 272,131.

To all whom it may concern:

Be it known that I, NICOLAUS STAUB, a subject of the Emperor of Germany, residing at Ottweilerstrasse, Schiffweiler Kries Ottweiler, in the Empire of Germany, locksmith, have invented certain new and useful Improvements in Boring-Bits, of which the following is a specification.

This invention has for its object a composite rose bit, in which a number of radially formed wedge-shaped cutters are arranged alternately and are held in position by means of a central cutter.

The boring bit which forms the subject of the present invention differs from those hitherto employed owing to the fact that with the central cutter, the cutter bar is employed in holding the outer cutters in place in the socket. By this means the advantage is obtained that the cutters may be released without the employment of a special tool merely by striking the cutter bar or the bottom of the socket.

The invention is illustrated in the accompanying drawing, in which:

Figure 1 shows the device in vertical section. Fig. 2 illustrates one of the wedge-shaped outer cutters in two different positions. Fig. 3 shows the socket for the cutters in bottom plan and in vertical section. Fig. 4 is a side elevation of the crown bit. Fig. 5 gives two views of the central conical shaped circular cutter. Fig. 6 is a plan view of the crown bit without the circular cutter and Fig. 7 is a plan view showing the central cutter in place.

The rose bit consists in the usual manner of an inner circular cutter *a* and wedge-shaped outer cutters *b*, provided with wedge-shaped cutting edges *k* and stepped at *n* on their sides which are directed one to the other; they also have curved surfaces *l m* of different curvature. These surfaces *l* present the same radius of curvature as the adjoining faces of the circular cutter *a* which is formed with a flat cutting edge *i*.

The wedge-shaped cutters are held in the bore *d*, which widens at *e* and *f*, of a socket *c*, on the one hand in the known manner by means of the circular cutter *a* presenting the form of a truncated cone, and on the other

hand by the cutter bar *h* which passes through the opening *g* in the socket and is likewise in the form of a truncated cone.

For the purpose of assembling the tool, the cutters are arranged in position for use, their cutting edges resting upon a plane surface. The socket is then passed from above over the tangs *o* of the cutters and tapped with a wooden mallet. The tool may be conveniently taken apart by holding it firmly and then striking the cutter bar *h*. Upon the withdrawal of this latter the cutters may be loosened and readily removed.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A composite rose bit comprising a socket member having an opening in its bottom, radial cutters seated in the socket of said member, a central cutter engaging the upper part of said radial cutters, and a cutter bar passing through the opening in the socket member and engaging the lower part of the radial cutters.

2. A composite rose bit comprising a socket member having an opening in its bottom, radial cutters seated in the socket of said member, a central cutter having a shank located between and engaging said radial cutters, and a cutter bar passing through the opening in the socket member and located between and engaging the radial cutters.

3. A composite rose bit comprising a socket member having an opening in its bottom, radial cutters each having curved inner surfaces at their top and bottom and seated in said socket member, a conical central cutter inserted between the radial cutters and engaging their curved top surfaces, and a conical cutter bar passing through the opening in the socket member and located between the radial cutters and engaging their curved bottom surfaces.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses this 25th day of October 1906.

NICOLAUS STAUB.

Witnesses:

MAGDALENA STAUB,

WALTER HOUSING.