C. D. NETHERCUTT.

COUNTERBORE.

APPLICATION FILED APR. 12, 1917.

1,299,856. Patented Apr. 8, 1919.

Fig. 1.

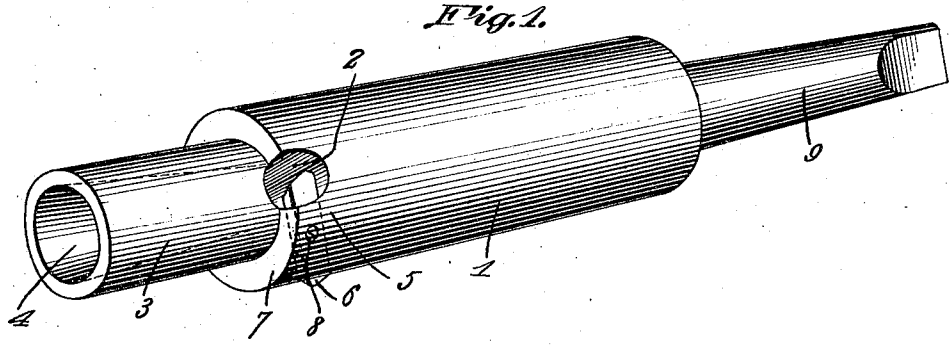
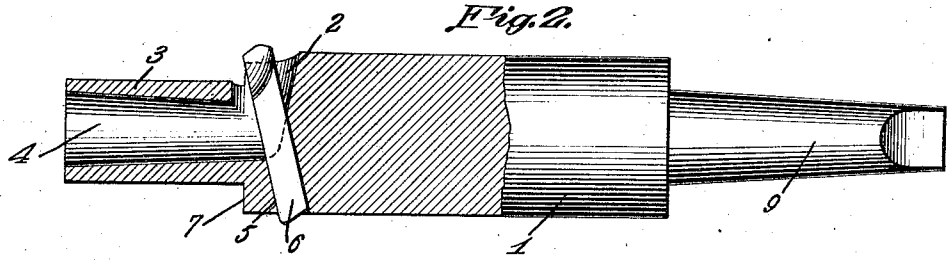


Fig. 2.



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WITNESSES

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CHARLES D. NETHERCUTT, OF BURNETTS CREEK, INDIANA.

COUNTERBORE.

1,299,856. Specification of Letters Patent. Patented Apr. 8, 1919.

Application filed April 12, 1917. Serial No. 161,580.

To all whom it may concern:

Be it known that I, CHARLES D. NETHERCUTT, a citizen of the United States, residing at Burnetts Creek, in the county of White and State of Indiana, have invented certain new and useful Improvements in Counterbores, of which the following is a specification.

My invention relates to a drill bit and the principal object of the invention is to provide a device of this nature that will rebore, or make larger, holes of small size, such as is the case where larger shaftings are to be substituted and it is desired to use the old belt pulleys.

Another object is to provide means for trueing the new hole by the old one and means engaging with the new hole to prevent lateral movement of the bit.

Another object of the invention is to carry away the dust and shavings from the cutting point.

Another object of my invention is to provide a device of this character which is simple and durable in construction, reliable and efficient in operation and one which can be manufactured and placed upon the market at a minimum cost.

The invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings, wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a perspective view.

Fig. 2 is a longitudinal sectional view.

In these drawings, the body of the bit is shown at 1, said body being provided with a radial recess 2 at its lower edge. The body has a reduced portion forming a pilot 3, which extends axially from the lower end of the body. The pilot is provided with a dust vent 4 which communicates with the recess 2 formed in the edge of the body. The body is also provided with a recess 5 extending from the recess 2 through the body and this receives a knife 6, the cutting end of which extends in the recess 2 and projects slightly beyond the same. This knife is provided with two cutting edges, one for cutting the material in contact with the shoulder 7 between the body and pilot and the other for forming the hole as the body enters the new hole, and said knife is held in place by the screw 8.

The body is provided with a shank 9, with which the brace engages, whereby the drill bit may be actuated. When a small hole is to be made larger the pilot 3 is placed in the hole and by operating the brace the knife 6 will cut away the material around the hole and thus make a hole the size of the body 1. As the pilot is to fit snugly in the small hole, this will act as a guide for the knife and as soon as the body 1 enters the hole being cut it will prevent all lateral movement of the device so as to make a perfectly round hole.

This device is particularly adapted for use in making the holes in pulleys larger where such pulleys are to be used on larger shafting and the tool can be used with any post drill or press drill, or it can be used as a lathe tool. The tool will work just as well on pulleys having key slots and set screw holes therein.

It is thought from the foregoing that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make slight changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

I claim as my invention:

1. A counterbore comprising a body portion having a transverse recess in its lower edge, a cutting member in said body having its cutting edge adjacent said recess, and a pilot projecting from the body portion having an opening therethrough communicating with the recess in the body portion to carry off the shavings passing through the transverse recess.

2. A counterbore comprising a body portion, a pilot on the lower end of said body portion extending axially thereof and having an opening therethrough, the lowermost end of the body portion adjacent said pilot being

provided with a transverse recess communicating with the opening through the pilot, and a cutting member passing through said recess and having its cutting edge adjacent said recess so that shavings from the cutting edge will pass through the transverse recess and into the opening to the pilot.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES D. NETHERCUTT.

Witnesses:
GEORGE DUFFEY,
J. P. GALBRETH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."