

J. H. BARKER.
REVOLVING CUTTER.
APPLICATION FILED JULY 26, 1909.

959,104.

Patented May 24, 1910.

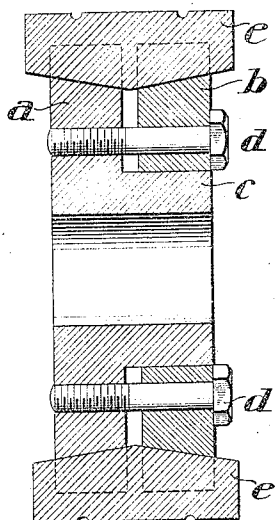


Fig. 1

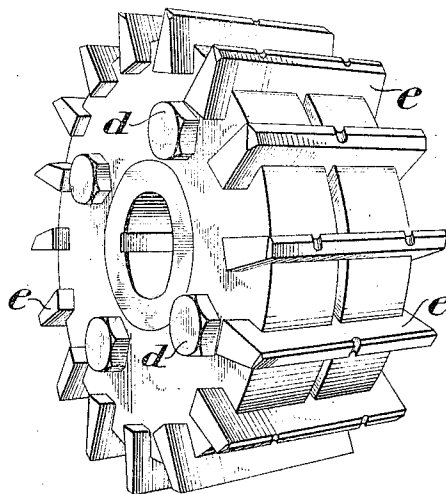


Fig. 2

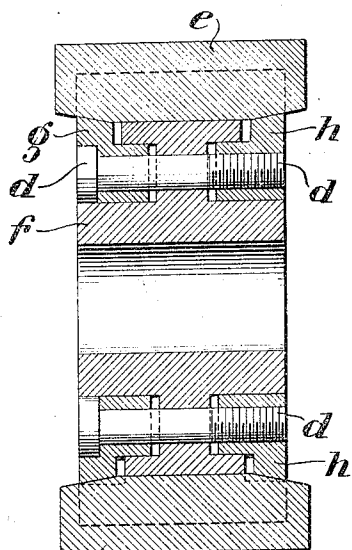


Fig. 3



Fig. 4



Fig. 5



Fig. 6

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN HENRY BARKER, OF SHEFFIELD, ENGLAND.

REVOLVING CUTTER.

959,104.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN HENRY BARKER, a subject of England, residing at 290 Granville road, Sheffield, in the county of York, England, have invented new and useful Improvements in Revolving Cutters; and I do hereby declare the nature of my said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement.

The object of my invention is to construct a revolving tool for working in metal, wood, or other material and which is applicable to milling, tongueing, grooving, molding, planing and the like purposes, such tool being provided with removable and interchangeable cutters in such a way that when the cutters are inserted and set into the required position, they shall be firmly secured so that they cannot work loose or fly out in any direction.

As the principle of my invention will be the same irrespective of the purposes for which the tool is used, a description of it as applied to a milling cutter will suffice.

My invention will be better understood on reference to the accompanying sheet of drawings in which,

Figure 1, is a section of a double disk cutter. Fig. 2, being an external elevation in perspective of the same. Fig. 3, is a section of a modified form or three disk cutter. Figs. 4, 5 and 6, being some of the cross sections which I employ for the interchangeable teeth.

The same letters refer to similar parts throughout the several views.

I carry out my invention by forming the cutter holder in two separate disks, *a*, *b*, of uniform thickness and diameter externally, one disk, *a*, is provided with a projecting boss, *c*, on one side, which is bored to receive the spindle or mandrel, and the other disk, *b*, is bored large enough to fit over the boss on its companion disk, both disks are likewise provided with holes by which they may be secured together with bolts or set screws, *d*.

In the periphery of both disks I form as many dovetail slots as there are cutters, *e*, to be carried. These slots are arranged parallel to the axis of the disk, or they may be placed at any convenient angle to which it may be desired to place the cutters. These dovetail slots are likewise formed with their

roots or bottoms deeper on the inner faces of the disks than they are on their outer faces, consequently they are proportionately wider on their inner than they are on their outer faces, as shown in Figs. 1 and 2. This particular formation of slot enables me to fit into it a cutter which shall have a wedge formed section being thicker at its root than at its cutting edge and which will likewise be deeper and thicker in its center than at its outer ends, thus forming inclined planes corresponding to the inclination of the roots of the dovetail slots into which they are secured, as shown in Figs. 1 to 6.

A cutter formed as herein described is fixed in position by first entering one end into the slot in one disk and its other end into the slot in the companion disk, the disks being moved wide enough apart to receive them. When the disks are closed toward each other, then by reason of the inclined roots of the slots, they come in contact with the correspondingly inclined roots of the cutters, the cutters will be forced outwardly into the grip of the dovetail slots, and by reason of the disks being brought near or close together and secured by the bolts or set screws, *d*, it will be impossible for the cutters to fly out or move either in a radial or in a lateral direction, as shown in Figs. 1 and 2.

Sometimes instead of securing the two disks together by bolts or set screws, I form the spindle or mandrel with a collar and also with a screw and nut on its outer end, so that the disks may be closed together and secured against the said collar by screwing up the nut which may itself be secured by a lock nut or other means ordinarily in use.

As a modification of the arrangement herein described where wide cutters are required I construct the disks in three parts as shown in Fig. 3, in which, *f*, is the central disk and *g*, *h*, are the two side disks, and *e*, the cutters, the whole being secured together by bolts or set screws, *d*, as shown.

I do not confine myself to any precise form either of the cutters or of the slots which carry them, so long as I am able to obtain the two-fold wedge action by which the cutters are secured in the disks.

What I do claim and desire to secure by Letters Patent is,

A tool comprising a cutter holder consisting of a number of disks having peripheral

slots therein, the bottoms of said slots having inclined portions, cutters fitting in said slots and having inclined portions on the bottoms engaging with the inclined portions of the slots, and means for securing together the disks.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

JOHN HENRY BARKER.

Witnesses:

W. H. BAIRSTO,
R. D. NORTON.