

938,673.

S. LINDSTRAND.
COUNTERSINK ATTACHMENT.
APPLICATION FILED FEB. 24, 1908.

Patented Nov. 2, 1909.

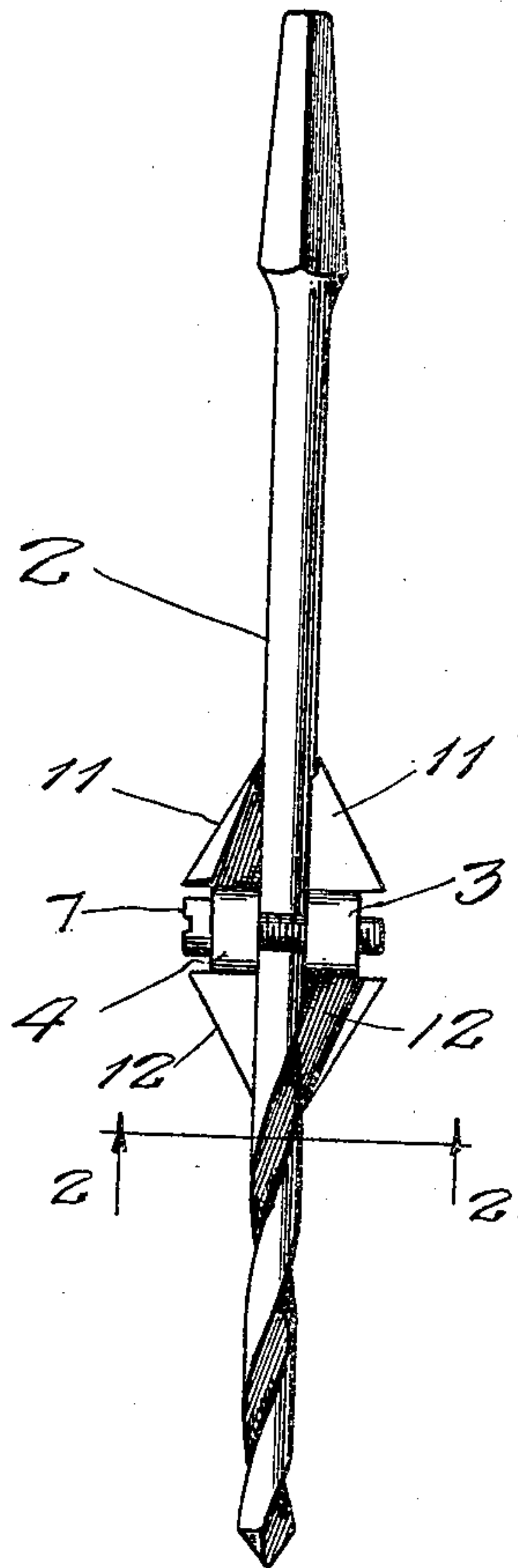


Fig. 1

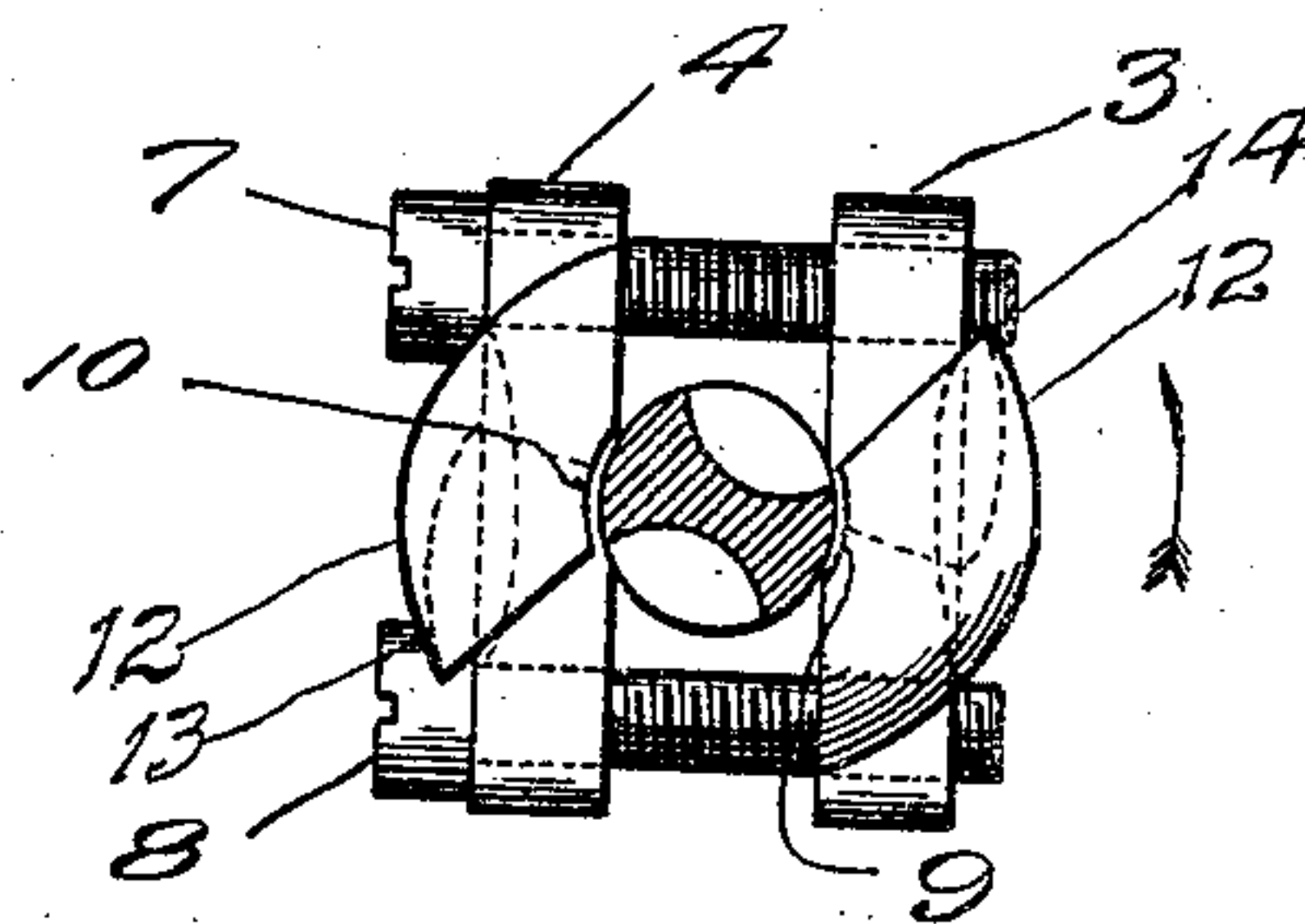


Fig. 2

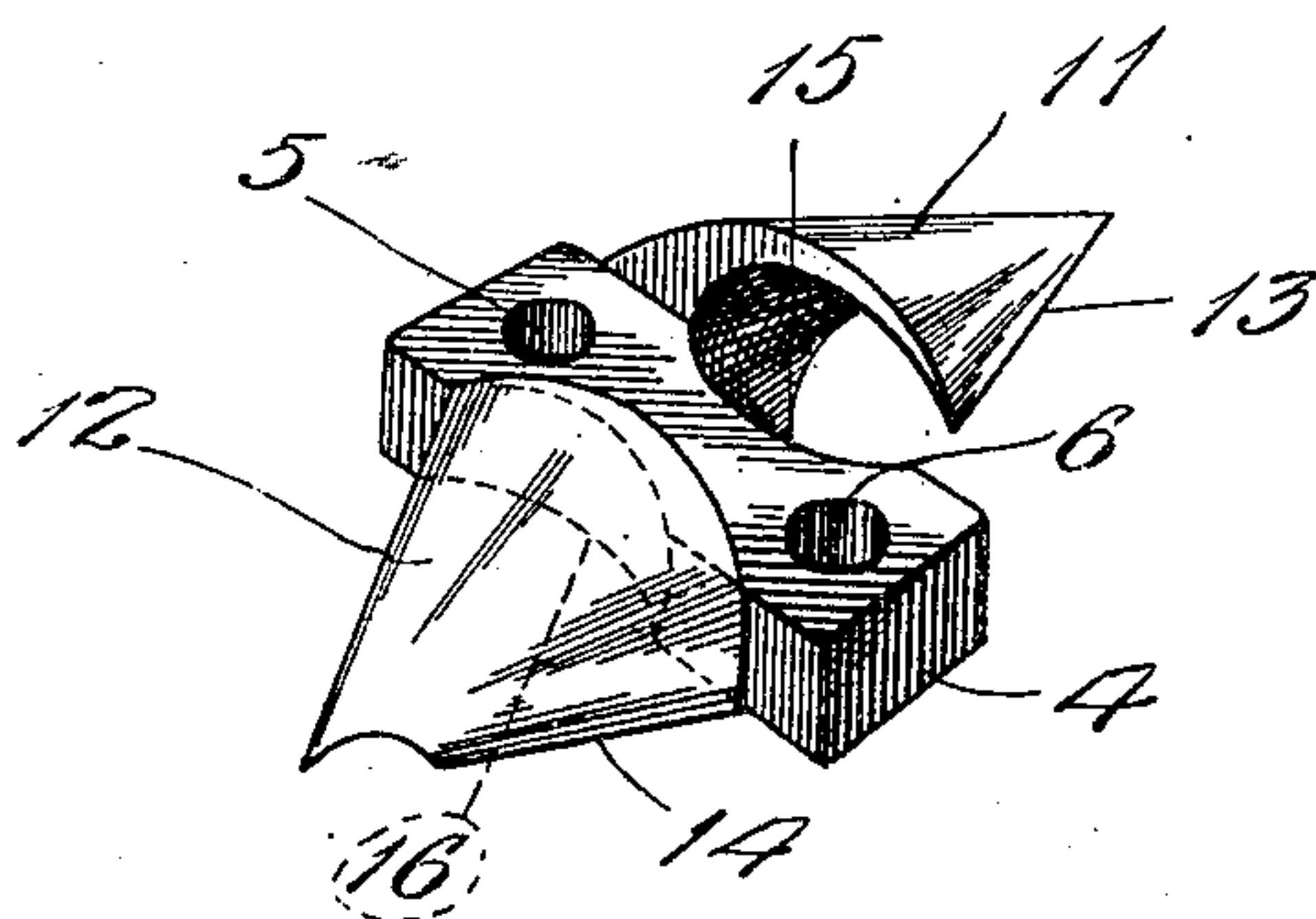


Fig. 3.

Witnesses:
M. Rosendahl
Attorney

Inventor:
Svan Lindstrand
by Warner Deekstron
Att'y.

UNITED STATES PATENT OFFICE.

SWAN LINDSTRAND, OF CHICAGO, ILLINOIS.

COUNTERSINK ATTACHMENT.

938,673.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed February 24, 1908. Serial No. 417,223.

To all whom it may concern:

Be it known that I, SWAN LINDSTRAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Countersink Attachments, of which the following is a specification.

My invention relates to countersinks, and has particular reference to countersinks adapted to be attached to drills and augers.

The object of the invention is to provide a countersink adapted for smooth as well as rough work and for keen and rapid cutting. And with this object in view my invention consists in the novel construction of countersink hereinafter described in detail, illustrated in the drawing and defined in the claim.

In the drawing—Figure 1 is a view of an ordinary drill and a counter-sink attachment embodying my invention secured thereto. Fig. 2 is an enlarged section taken on line 2—2 of Fig. 1. Fig. 3 is a perspective view of one of the two substantially identical halves or sections of the countersink.

Referring in detail to the several views, to the drill 2 is secured two countersink sections or halves which include clamp-members or bars 3 and 4. In each of the latter are perforations, as at 5 and 6 (Fig. 3), which are arranged to receive bolts or screws 7 and 8 which pass on opposite sides of the drill and have, preferably, threaded engagement with the holes or perforations in one of the clamp members. In the adjacent faces of the members 3 and 4 are grooves or recesses 9 and 10 which engage the drill 2 when the attachment is mounted thereupon as in Figs. 1 and 2. The above named features are all well known to those skilled in the art.

In Fig. 3 is shown one of the two halves or sections of my improved countersink and a description of said section will also describe the other section. Extending from the member 4 in opposite directions, and made integral therewith, or separately secured thereto in any suitable manner, are cutting blades 11 and 12. The latter are substantially curved knives whose curvatures and cutting edges are arranged in the direction of move-

ment when the drill is rotated, instead of tangentially, or radially, thereto as heretofore. Hence the cutting blades or knives make clean cuts or incisions into the work and pare off the edges of the drill hole with a shaving instead of a scraping movement. These knives, as clearly shown in Fig. 3, are comparatively thin and they taper from their backs to their cutting edges substantially like a pocket knife. This enables them to shave a countersink recess rapidly as well as smoothly. This is particularly important when the material operated upon is somewhat brittle and tends to chip and thus mar the work.

As shown in Figs. 1 and 3, the knives 11 form one set of cutters, or countersink, while the knives 12 form a separate set or countersink. The outer contour of each pair of knives is substantially cone sections and the cutters 11 are tapered differently from the cutters 12. Thus by simply reversing the position of the attachment upon the drill a different form of countersink may be made with the same attachment. To facilitate the free escape of the shavings the clamp members 3 and 4 are cut away as at 15 and 16 thereby producing a large oval or hollow shaving outlet, as shown at 15 in Fig. 3.

I claim as my invention:

A countersink attachment comprising two comparatively thick bars adapted to fit opposite sides of an auger and having means for clamping them thereon, either bar formed with a hollow conical sector extension tapering gradually circumferentially from the point of juncture with the bar to the cutting edge along one side and forming a conical sector-opening extending through such extension, said opening extending through the adjacent edge of such bar and being in line with and forming an extension of the delivery channel of the auger.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SWAN LINDSTRAND.

Witnesses:

I. H. ATHEY,
M. C. ALLEN.