

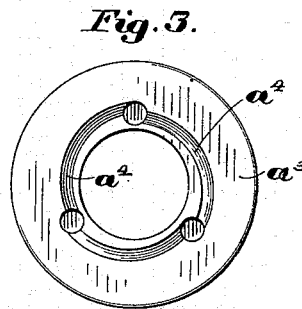
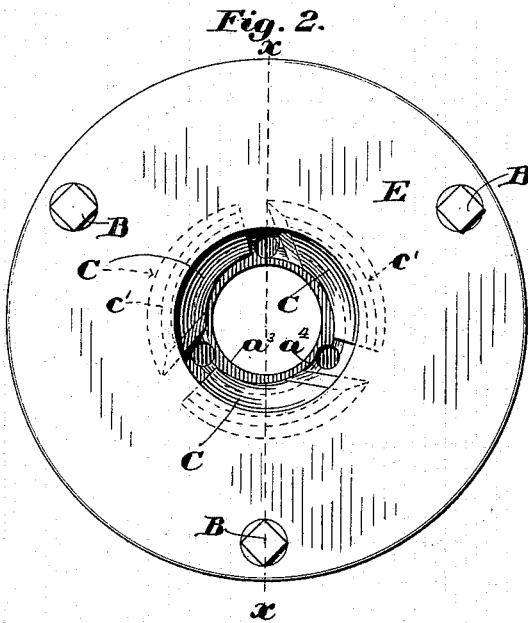
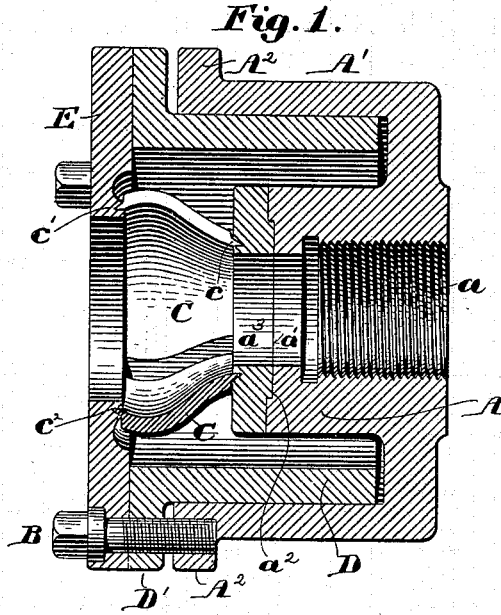
No. 612,378.

Patented Oct. 11, 1898.

E. CHILDS.  
CHUCK.

(Application filed Sept. 28, 1897.)

(No Model.)



*Witnesses:*  
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# UNITED STATES PATENT OFFICE.

EUGENE CHILDS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE TRIMONT  
MANUFACTURING COMPANY, OF PORTLAND, MAINE.

## CHUCK.

SPECIFICATION forming part of Letters Patent No. 612,878, dated October 11, 1898.

Application filed September 28, 1897. Serial No. 653,341. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE CHILDS, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Chucks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the manufacture of blades for rotary heel-trimming cutters it is customary to form and shape the blades by forging them roughly in suitable dies, and thereafter the outer convex face of each blade has been turned true in a lathe; but the interior of these blades has not been finished by a turning-tool, and as a result thereof the parts of the blades to be ground back in use are not of uniform thickness throughout. To improve the quality and finish of these blades and their efficiency in cutting, I have devised a novel chuck by which, after the convex faces of the blades have been turned true, the said blades may be held while their inner or concaved faces are acted upon and planed or turned smooth and even, thus making the blades of substantially uniform thickness from one to the other fin edge.

Figure 1 represents a section of my improved chuck with blades held in position therein to have their interior faces planed; Fig. 2, a front elevation of said chuck, the dotted line  $x$  on said figure representing the section for Fig. 1. Fig. 3 is a partial face view of the inner holding-plate employed to engage the edge or fin at one side of the blade to be turned true.

The hub A, forming the main body of the chuck, is threaded interiorly at  $a$  to be screwed upon any usual spindle of a lathe, and surrounding said hub at some distance from its center is a substantially circular wall  $A'$ , provided, preferably, with a suitable flange  $A^2$ , having holes which are tapped or threaded for the reception of suitable bolts B, there being left, as herein shown, between the inner central portion of said hub and the inner side of said circular wall an annular space.

The inner or left-hand end of the hub in Fig. 1 is shown as provided with a counter-sink  $a'$ , in which enters, as herein represented, a projection or flange  $a^2$ , extended from the

rear side of an inner holding-plate  $a^3$ , said plate having at its face, as shown in this instance, three eccentric grooves  $a^4$ , (see Fig. 3,) each of said grooves being separated from the other by a stop  $a^5$ , each groove receiving one of the side edges or fins, as  $c$ , of a blade C, the concaved side of which is to be turned true, the said blade having at its opposite side edge a second fin  $c'$ .

The angular space referred to in the hub receives the body of an adjustable sleeve D, the wall of said hub acting as a guide for said sleeve. The sleeve has a flange  $D'$ , which is bored for the reception of the bolts B. The flange of this sleeve serves as a seat to support and carry an outer holding plate or collar E, it having a central opening  $c^x$ , and close to said opening, at the inner side of said outer plate, I have provided a second series of eccentric grooves  $c^2$  for the reception of the fins  $c'$  of the cutters or blades C, parts of the grooves  $c^2$  lying in a circle of greater diameter than the circle occupied by any of the parts of the grooves  $a^4$ . The bolts B pass through holes in the plate E loosely and then loosely through holes in the flange  $D'$  of the sleeve D, and thereafter said bolts enter and are screwed into threaded parts of the flange  $A^2$  of the hub, as best shown in Fig. 1. The bolts B are screwed up tightly after the fins or edges of the blades the convex sides of which are to be turned true have been put into position between the said inner and outer holding-plates with their fins or edges in the said eccentric grooves, and by the rotation of said screws said blades are preferably clamped in position in the said chuck, so that they cannot be moved laterally or in any direction out of the position in which they are held by said holding-plates, so that when said chuck is rotated in any usual manner in a lathe a cutting-tool may enter the central opening  $c^x$  of the outer holding-plate E, and the cutting edge of said tool, of any suitable or usual shape, it contacting with the interior of the blades as the chuck is rotated, will plane or turn true and smooth the inner concaved sides of said blades.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A chuck for holding cutter-blades to be turned true at their concaved sides, said chuck consisting of a hub provided at one end with a series of eccentric grooves; and an  
5 outer holding-plate provided with a central opening and having arranged about said opening at the inner side of said plate a second series of eccentric grooves, said eccentric  
10 grooves receiving the fins or opposite side edges of the series of blades to be turned; and means to adjust said outer holding-plate to effect firm clamping of the blades in said  
15 chuck and leave their inner concaved faces free to be acted upon by a turning-tool as said chuck is rotated, substantially as described.

2. The hub having a guiding-wall, an inner holding-plate, and a sleeve guided by

said wall, combined with an independent, separable, open-centered, outer, holding-  
20 plate, said inner and outer holding-plates being shaped to engage the opposite edges of a series of blades to be turned true at their  
25 inner sides; and means to simultaneously adjust said outer plate and sleeve to effect the firm clamping of said blades, leaving their  
inner faces exposed to be acted upon by a turning-tool, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of  
30 two subscribing witnesses.

EUGENE CHILDS.

Witnesses:

GEO. W. GREGORY,  
EMMA J. BENNETT.