

(No Model.)

S. I. SNYDER.  
Chuck for Holding Watch Bezels.

No. 243,467.

Patented June 28, 1881.

Fig. 1.

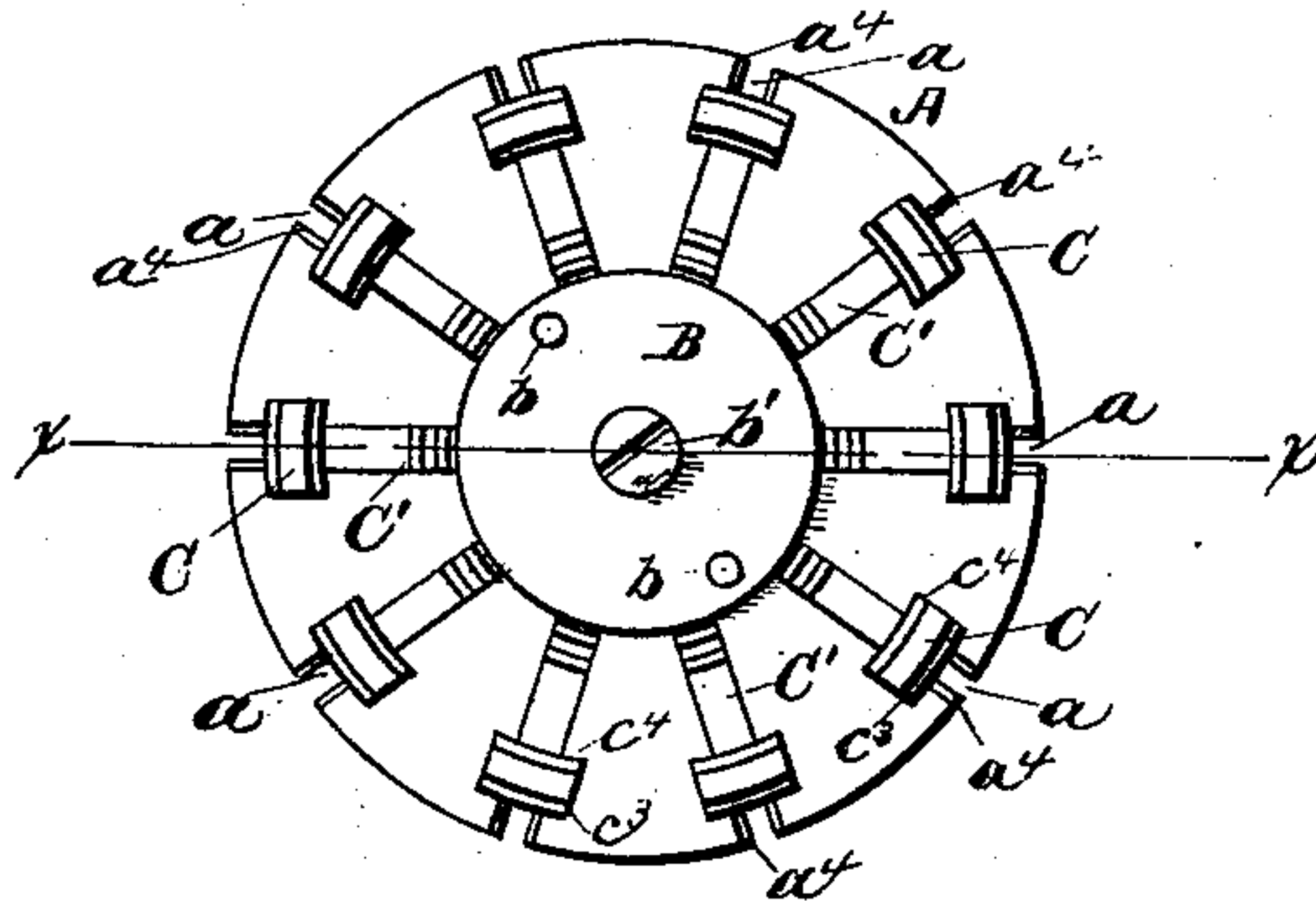


Fig. 2.

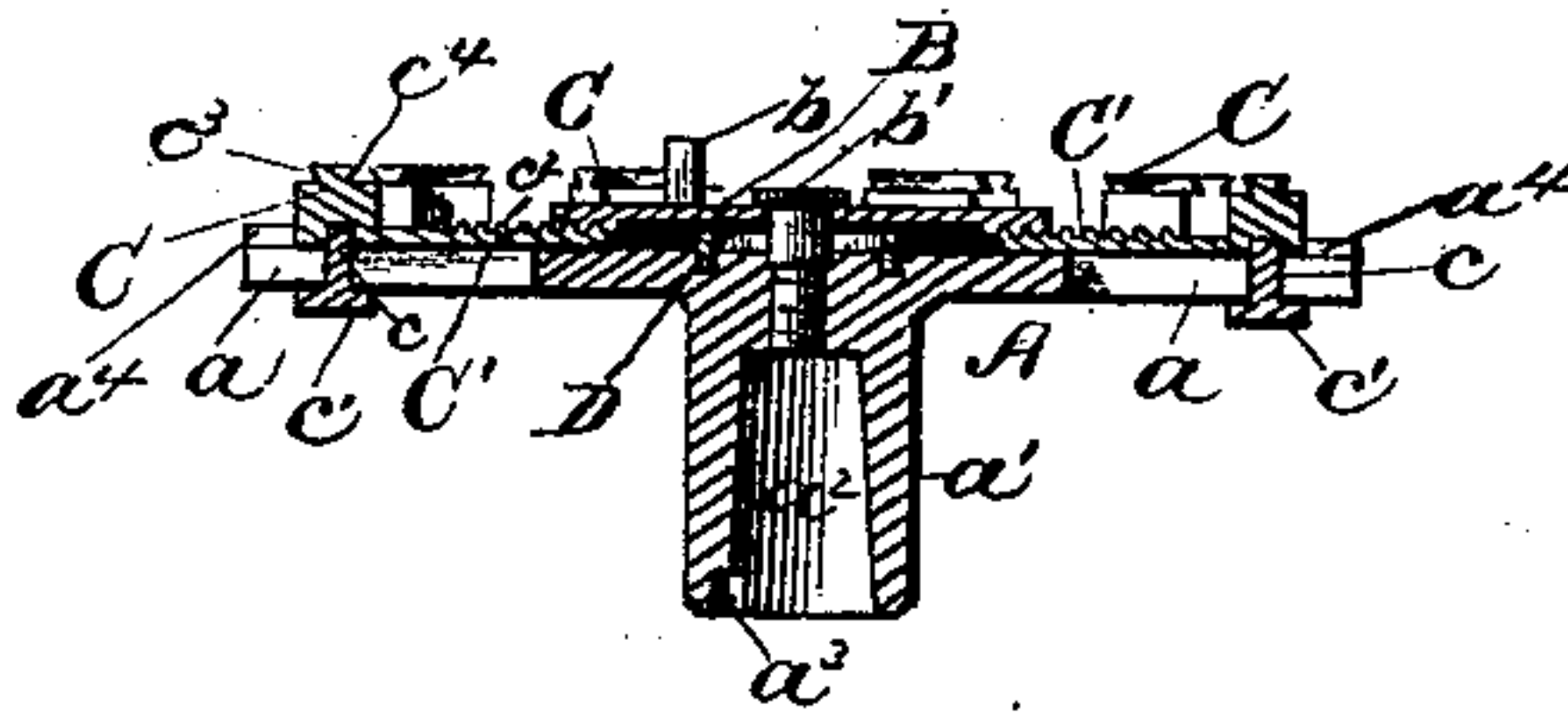
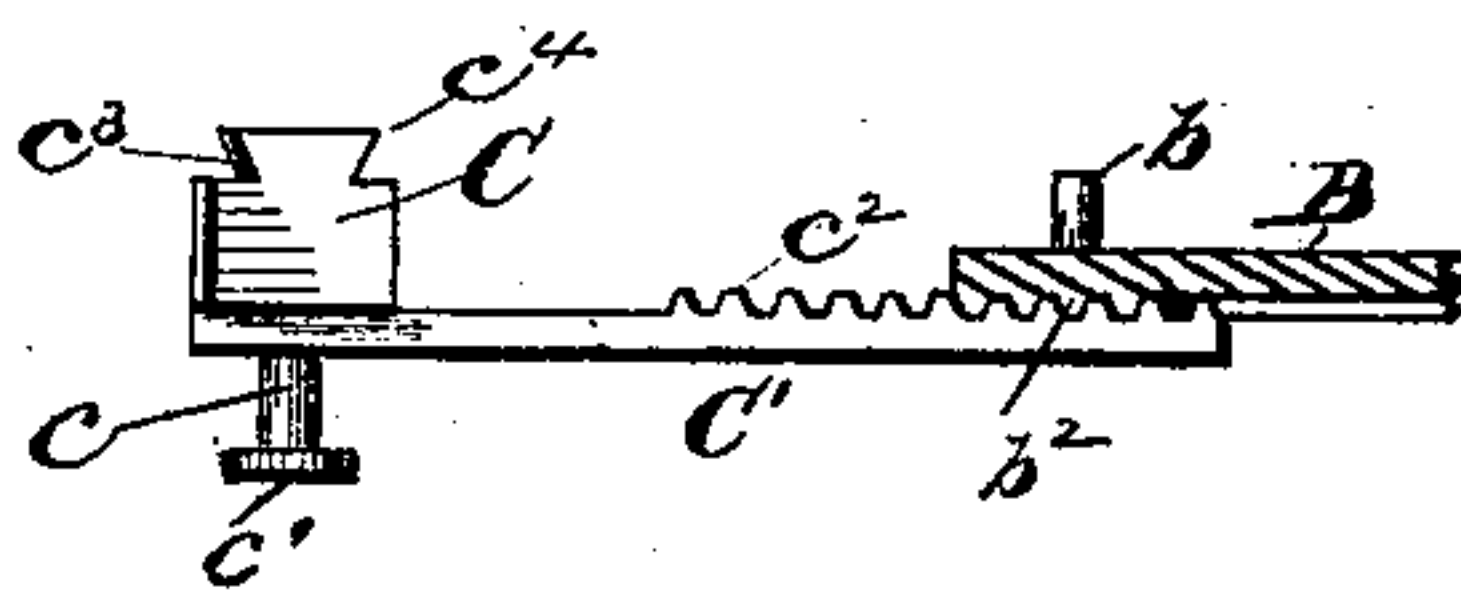


Fig. 3.



Attest,  
W. H. H. Knight  
Moses Foskey Jr.

Inventor,  
Samuel I. Snyder  
by E. E. Kirk  
Atty

# UNITED STATES PATENT OFFICE.

SAMUEL I. SNYDER, OF CLEARFIELD, PENNSYLVANIA.

## CHUCK FOR HOLDING WATCH-BEZELS.

SPECIFICATION forming part of Letters Patent No. 243,467, dated June 28, 1881.

Application filed April 15, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL I. SNYDER, a citizen of the United States, residing at Clearfield, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Chucks for Holding Watch-Bezels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

In the drawings, Figure 1 is a front view of my improved chuck for watch-lathes. Fig. 2 is a diametrical section on the line  $xx$  of Fig. 1. Fig. 3 is a side elevation of one of the sliding-dogs detached from the body of the chuck, and also shows a section of the central revolving plate for moving said dogs to and fro longitudinally.

Similar letters of reference in the several drawings denote similar parts.

Those persons whose business or occupation requires the use of small lathes—as, for instance, jewelers, watch-makers, &c.—have long felt the need of a simple, durable, and easily-operated chuck wherewith to firmly hold such pieces of mechanism as require to be made or repaired by or in the lathe.

To accomplish the above end many inventions have been made, but in the majority of cases such inventions have been of such complicated nature as to render them practically useless.

The object, therefore, of the present invention has been to provide a simple, durable, and easily-operated chuck for the use of the craftsmen above named, which chuck, although more particularly designed for turning the grooves in and rounding the outer edges of watch-bezels, is yet applicable to many purposes for which a chuck is used; and to this end it consists in a chuck provided with laterally-moving dogs having their outer ends turned in an upward direction and provided with shoulders or recesses, beveled to hold the bezel or other work, as hereinafter set forth and described.

It also consists in means whereby the dogs

are set correctly and rapidly in the body of the chuck, as herein described; and—

It finally consists in the combination of the parts as a whole, and in the means whereby the chuck is secured to the mandrel of the lathe, as will be hereinafter set forth and described.

Referring to the drawings, A represents the body of the chuck, consisting of a thin circular disk or plate, of brass or other suitable metal, provided upon its rear surface with a boss or hub,  $a'$ .

In the plate A, equidistant from each other and diverging from a common center, are a number (preferably ten) of slots  $a$ , having at their upper edges and at each side thereof retaining-shoulders  $a^4$ , within and upon which rest and slide thin flat bars  $C'$ , provided at their outer ends with upwardly-projecting portions or anvils C, such bars  $C'$  and anvils C constituting the retaining-dogs of the chuck. The outer and inner sides of the anvils C are in curved form, as shown.

Near the upper surfaces of the anvils C, and at each side thereof, are shoulders or recesses  $c^3$   $c^4$ , the rear side of each of which is beveled to more securely hold the desired article. The anvils C project outwardly at each end beyond the sides of the slot  $a$ , said projecting portions resting upon the face of the plate A.

Projecting from the lower surface of the anvils C, and extending through the slots  $a$ , are studs or pins  $c$ , provided at their outer ends with heads  $c'$  that bear upon the rear surface of the plate A, thereby keeping anvil C and bar  $C'$  in position in the slot  $a$ , as will be readily understood.

I provide the upper surface of the bars  $C'$  with teeth  $c^2$ , that engage with corresponding spiral grooves  $b^2$ , formed in the lower surface of a circular plate, B, pivoted to the center of the plate A by a screw,  $b'$ . The plate B is rotated by means of small studs  $b$ , that project from the upper surface thereof, and when so rotated will, inasmuch as the groove  $b^2$  is of spiral form, or is, in fact, one continuous groove, draw the dogs inward or move them outward as the plate B is rotated right or left.

The inward movement of the dogs is limited by an annular ring, D, secured to and projecting above the upper surface of the plate A, as shown. This ring I deem of importance, inas-



much as it is only necessary, in order to correct the chuck at any time, to remove the plate B, push the dogs into their proper slots and backward until their rear ends bear against the ring D, and replace the plate B, when the anvils C will be equidistant from the center of the plate.

The boss or hub  $a'$  of the plate A is provided with a slightly-conical recess,  $a^2$ , and at one side, near the outer end of said recess, is a small nick or recess,  $a^3$ , which fits upon a pin or stud in the mandrel of the lathe when the chuck is in place, thus preventing the chuck from being rotated upon said mandrel.

The recess  $a^2$  may be provided with a female screw, if desired.

I am aware that chucks have been made the clamping-dogs of which are moved in lateral direction by a spiral groove acting upon teeth in said dogs, and this I therefore do not claim, broadly; but

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

1. In a lathe-chuck, the combination of the plate A, provided with slots  $a$ , having shoulders  $a^4$ , boss or hub  $a'$ , having the conical-

shaped recess  $a^2$  and recess  $a^3$ , with the circular plate B, having the spiral groove  $b^2$  and studs  $b$ , bars  $C'$ , provided with anvils C, having beveled retaining-shoulders  $c^3 c^4$ , and studs  $c$ , having head  $c'$ , substantially as described.

2. In a lathe-chuck, the annular ring D, attached to the upper surface of the plate A, about the center thereof, whereby the inward movement of the dogs may be limited and whereby the said dogs may be at all times set in proper position, substantially as described.

3. In a lathe-chuck, the combination of the bars  $C'$ , provided with teeth  $c^2$ , anvil C, having beveled retaining-shoulders  $c^3 c^4$ , and stud  $c$ , having head  $c'$ , with an annular ring, D, and circular plate B, provided with spiral grooves  $b^2$  and studs  $b$ , as set forth.

4. In a lathe-chuck, the anvils C, provided with recesses or shoulders  $c^3 c^4$ , having beveled sides, substantially as described.

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

SAML. I. SNYDER.

Witnesses:

J. F. SNYDER,

J. F. MCKENRICK.