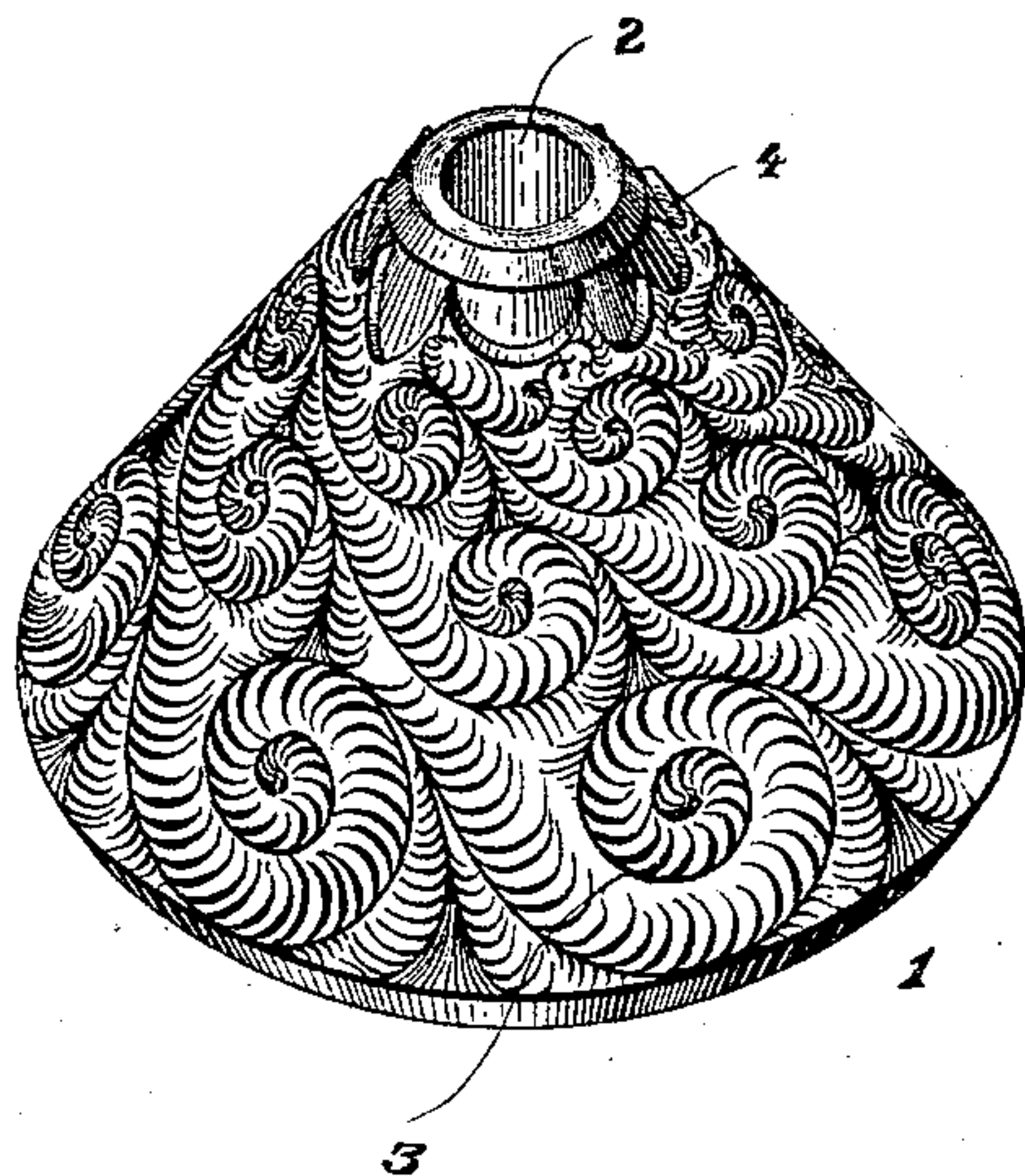


(No Model.)

H. F. COOK.  
KNURLING TOOL.

No. 454,788.

Patented June 23, 1891.



Witnesses  
*John F. Nelson*  
*Lillie Hanna*

Inventor.  
*Henry F. Cook*  
By *Knights Bros*  
Attorneys.

# UNITED STATES PATENT OFFICE.

HENRY F. COOK, OF SAG HARBOR, NEW YORK, ASSIGNOR TO THE FAHYS  
WATCH CASE COMPANY, OF SAME PLACE.

## KNURLING-TOOL.

SPECIFICATION forming part of Letters Patent No. 454,788, dated June 23, 1891.

Application filed September 28, 1888. Renewed August 17, 1889. Serial No. 321,051. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY F. COOK, a citizen of the United States, residing at Sag Harbor, county of Suffolk, State of New York, have invented certain new and useful Improvements in Knurling-Tools, of which the following is a specification.

My invention consists in a knurling-tool made tapering in form to be used for transferring a circular or concentric pattern or design to a flat or slightly-rounded surface, and, further, in making the edge or edges of such a knurl with cut-away portions, so that the design formed by its edge may be of predetermined pattern or inclosing border.

The accompanying drawing represents in perspective a knurling-tool made in accordance with my invention.

The knurling-tool 1 is made tapering in form to adapt it to form a concentric design on the surface of metal to be ornamented, and has the customary perforation 2 and surface design 3, which, as here shown, is of vermicelli pattern. I cut away one or both edges of the knurling-tool, as at 4, the cut-away portion being of such irregularity as that when the knurl is pressed and rotating on the surface to be ornamented will form on such surface any pictorial or predetermined design. The cut-away portion shown in the drawing is, for example, of such contour as to form on the surface to which the knurl is applied for ornamentation a shield-shaped figure; but it

is apparent that my invention is not limited to the form of such figure. On the contrary, the cut-away portion may be varied in shape to produce any desired predetermined design.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A knurling or embossing tool 1 2 of tapered form, having a peripheral ornamentation 3 and irregular cut-away portion 4 on its edge or crown, adapted to form by said edge a predetermined pictorial margin or border associated with the embossed pattern, substantially as set forth.

2. A knurling or embossing tool 1 2 of conical form, having irregular cut-away portion 4 on its edge or crown, adapted to form by said engraved periphery an annular ornamental figure and by said crown a predetermined pictorial margin or border to said annular figure, substantially as set forth.

3. A knurling or embossing tool of tapered form, having a peripheral ornamentation 3 and a continuous cut-away portion 4 on its edge or corner, adapted to form by said edge a predetermined continuous margin or border concentric with and associated with the embossed pattern, substantially as set forth.

HENRY F. COOK.

Witnesses:

JNO. SHERRY, Jr.,

E. A. CARPENTER.