(No Model.)

C. H. YARRINGTON.

MANUFACTURE OF WATCH CROWNS.

No. 356,862. Patented Feb. 1, 1887.

Fig. 1

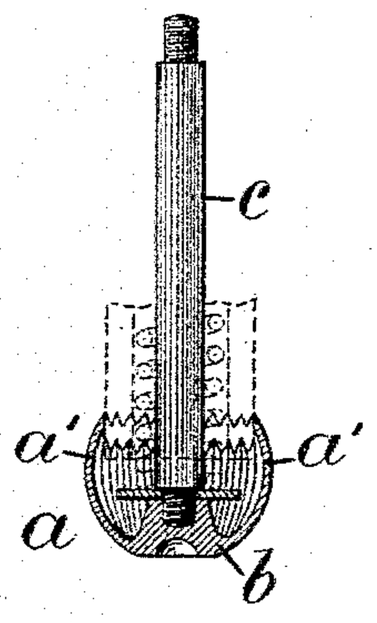


Fig. 4

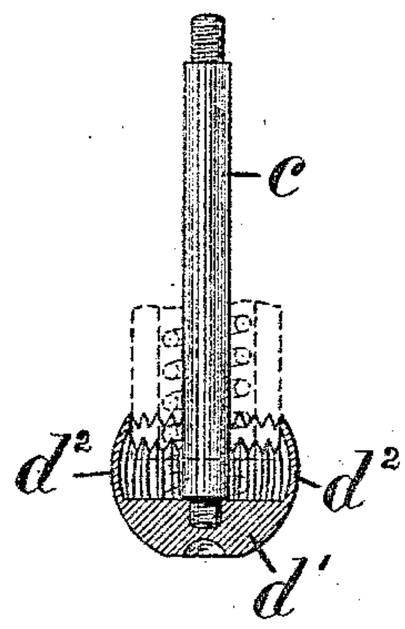


Fig. 2

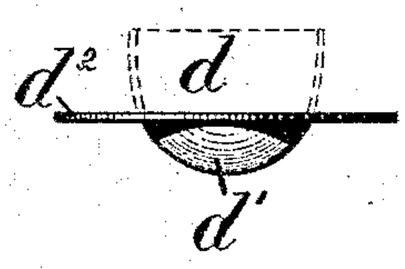
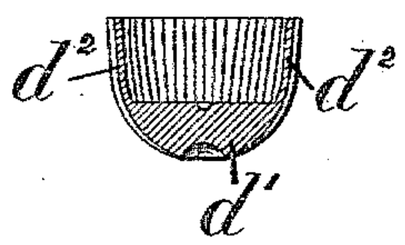


Fig. 3



Witnesses:

Wm. Bjorkman

A. B. Jenkins.

Inventor:

Charles H. Yarrington.

by Simonds & Burdett.

Attys.

UNITED STATES PATENT OFFICE.

CHARLES H. YARRINGTON, OF CHESHIRE, CONNECTICUT, ASSIGNOR TO THE CHESHIRE WATCH COMPANY, OF SAME PLACE.

MANUFACTURE OF WATCH-CROWNS.

SPECIFICATION forming part of Letters Patent No. 356,862, dated February 1, 1857.

Application filed September 13, 1886. Serial No. 213,367. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. YARRINGTON, of Cheshire, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in the Manufacture of Watch-Crowns, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My within-described improvement relates to the invention that forms the subject-matter of my pending application for United States Letters Patent of Serial No. 193,837; and the object of such improvements is to produce a watch-crown by simpler and cheaper methods and of greater strength as compared with prior methods and devices.

To this end my improvement consists in an improved blank for a watch-crown, the said blank consisting of a metallic disk with a thin edge and a projecting central part rounded to substantially the shape of the finished crown.

It further consists in the improved crown composed of a globular piece of metal with an integral base in thickness equal to at least a third of the height of the crown, the exterior of the said base and of the thin walls being corrugated with a flattened inner surface to the said base, and in further details of the device, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a view, on enlarged scale, in central longitudinal section of a crown made in accordance with my said prior application. Fig. 2 is an edge view of the blank in the first step in my within-described improvement. Fig. 3 is a view in central section of a cupped blank, the result of the second step in my improved process. Fig. 4 is a view in central section of my improved watch-crown completed and with the stem or winding-spindle secured within it.

The objection to my prior process is, that the tools, and particularly the punches, used in making the peculiar watch-crown have so fine a point that they are easily broken and have to be constantly renewed or repaired at great expense, although the watch-crowns produced by the said process are quite strong and durable.

In the accompanying drawings, the letter *a* denotes a watch-crown made in accordance with my said prior method; *b*, the base; *a'*, the thin walls of the shell, and *c* the stem or winding-arbor that is secured to the crown. This watch-crown is made from a disk having a central teat and thin edges, the latter being turned up to cup shape with this teat or base on the inside of the bottom of the cup.

The letter *d* denotes my improved blank, that is made of suitable metal—as brass or German silver—with a central teat, *d'*, and thin edges *d²*. This blank is made by well-known tools, and is stamped or swaged to shape from sheets of the metal. The peculiar feature of the blank is in the base *d'*, that forms a large part of the mass and is of a peculiar conoidal or rounded shape, substantially that of the finished crown, and the surface of this base forms the outside of the finished crown, the thin edges *d²* being turned upward into the position indicated in the dotted lines and by means of suitable tools, the outer surface of this base and the thin wall being corrugated in this same step in the process. In its resultant cup shape the mass of the base is at least one-third of the height of the cup. Into the flat bottom within this cup a hole is preferably pricked by a centering-punch when the blank is cupped and corrugated. This central hole forms a guide for the drill in making a hole that may afterward be tapped to receive the threaded end of the stem, and this flat surface of the base within the cup forms a base for the spring, and does away with the need of a washer such as is used in my prior invention. The upper and thin edge of this cup is next trimmed true, its walls are bent or curved inward, and the inner edge is then milled out, so that the finished crown may fit closely about the cylindrical stem of the watch.

I claim as my improvement—

1. The method or process of making watch-crowns, which consists in reducing the edge of a metallic disk in dies and leaving a thickened rounded center having a surface of substantially the outline of the finished crown, then drawing the thin edge of the blank upward and away from the rounded central projection, leaving the latter on the outside of the cup,

with the surface opposite the projection forming the flat bottom of the crown, the rounded surface of the base and the walls being corrugated in the dies that form this cup-shaped blank, then drilling and tapping the base to receive the threaded end of the winding-arbor, then closing and rounding the thin walls inward and milling them off to fit a watch-stem, all substantially as described, and for the purpose set forth.

2. The improved blank for a watch-crown, that consists of a metal disk with a thin edge and a projecting central part rounded to substantially the shape of the finished crown, as and for the purpose set forth.

3. The improved crown consisting of the globular piece of metal with an integral base, in thickness equal to at least a third of the height of the crown, the exterior of the base and of the thin walls rising therefrom being corrugated, the floor of the base within the cup being substantially flat and extending from wall to wall, all substantially as described.

CHARLES H. YARRINGTON.

Witnesses:
N. BRIGHAM HALL,
HENRY J. STEWART.