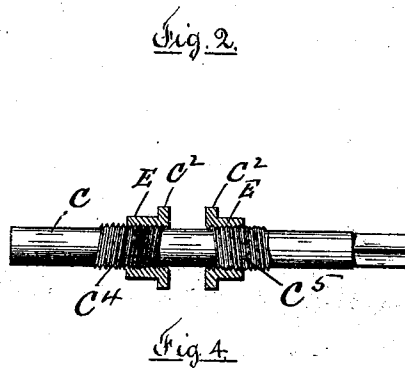
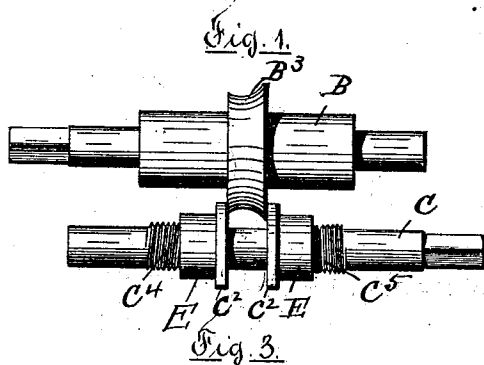
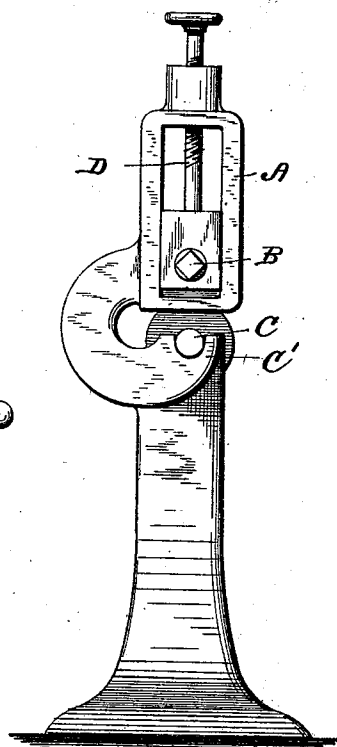
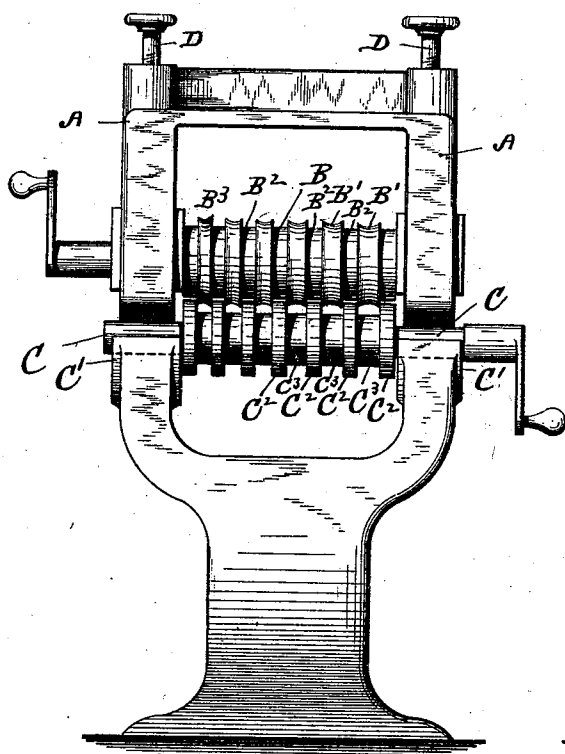


(No Model.)

J. C. ROCHELEAU.
JEWELER'S ROLL.

No. 503,218.

Patented Aug. 15, 1893.



Witnesses
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JOHN C. ROCHELEAU, OF WORCESTER, MASSACHUSETTS.

JEWELER'S ROLL.

SPECIFICATION forming part of Letters Patent No. 503,218, dated August 15, 1893.

Application filed June 5, 1890. Serial No. 354,401. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. ROCHELEAU, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Jewelers' Rolls, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, and in which—

Figure 1 represents a front elevation of a jeweler's roll, which embodies my invention. Fig. 2 is an end view of the same. Fig. 3 is a view of a pair of rolls detached from their housing and made adjustable, and Fig. 4 represents the lower roll shown in Fig. 3, but with the guides represented in sectional view.

Similar letters refer to similar parts in the different figures.

My present invention relates to certain improvements in jewelers' rolls for enlarging rings and it consists in certain changes and modifications of the jewelers' rolls for the same purpose, which formed the subject of the Letters Patent No. 361,084, granted to me on the 12th day of April, 1887, to which Letters Patent reference is herein made.

The object of my present invention is to provide means whereby the lateral displacement of the ring is prevented, in case it is necessary to bring the pressure to bear entirely upon one edge of the ring, to provide means whereby the pressure can be applied to one edge of the ring only, the opposite edge being entirely relieved from pressure.

Referring to the accompanying drawings A, denotes the frame in which the rolls are journaled.

B denotes the upper roll which is journaled in boxes capable of a vertical adjustment.

C is the lower roll upon which the ring to be enlarged is placed and journaled in the half boxes C', C', in order to allow the roll to be readily removed.

Pressure is applied to the upper roll B through the screw threaded rods D, D, in the same manner and for the same purpose as shown and described in the Letters Patent above referred to.

The upper roll B is provided with concave grooves to fit the convex sides of the rings and the face of the lower roll is a plain cylindrical surface, upon which the ring is supported

as it is being stretched between the rolls. The ring to be enlarged is placed upon the lower roll and the upper roll B is brought against it with a pressure which operates to stretch the ring as it is rolled back and forth between the rolls, in the same manner as described in the Letters Patent above referred to. In case a ring was thinner upon one edge than upon the other the pressure of the rolls would be applied to the thicker edge, and upon one side of the center of the ring causing the ring to slide along upon the lower roll. It is also sometimes desirable to press upon the ring at one of its edges with a harder pressure than upon the other edge. For this purpose the concave groove in the upper roll is made so as to press harder upon one side than upon the other, independently of the thickness of the edges of the ring, and in such cases it is necessary to prevent the lateral displacement of the ring. The upper roll B containing the concave grooves B' are also provided with grooves B² to receive the flanges C² and in the spaces between the flanges C² upon the lower roll the ring, to be enlarged, is placed and the upper roll is brought down upon the surface of the ring with a pressure applied through the screw threaded rods D, D. The spaces between the flanges C² are made of different widths to fit rings of different widths, so that a ring placed between two of the flanges will be held from lateral displacement upon the lower roll. Likewise the upper roll is provided with a series of concave grooves B' to fit the convex surface of rings of different widths, and the spaces between the flanges upon the lower roll correspond with the widths of the concave grooves, B'. In order to allow a pressure to be applied to one edge of a ring when desired, I form a portion of the grooves upon the upper roll, as shown at B³, Figs. 1 and 3, so that one edge of the ring will be rolled by contact with the upper and lower rolls while the opposite edge is out of contact with the upper roll. This result is accomplished by making the diameter of the upper roll at one side of the concave groove greater than the diameter upon the opposite side, so that when a ring whose outer or convex surface is symmetrical, the pressure will be greater upon one side than upon the other.

In Figs. 1 and 2 I have shown a completed

machine in which the rolls are provided with a series of grooves adapted to receive rings of varying widths; in practice, however, I prefer to form a single concave groove upon the upper roll B and thereby allow space for adjustable flanges upon the lower roll, allowing the space between the flanges to be varied and the upper roll exchanged for rolls having grooves of different sizes. In order to adjust the flanges C² upon the lower roll C, I form screw threaded sections C⁴ and C⁵ and I provide the flanges C² with hubs E forming an internal screw thread fitting the screw threaded sections upon the lower roll.

The screw threaded sections C⁴ and C⁵ are right and left screw threads respectively, so that the nuts E, E, are adjusted to fit other upper rolls having grooves of varying width. The flanges C² are small enough to allow the ring to be stretched to slip over them and drop into the spaces between the flanges.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for enlarging jewelers' rings, the combination of an upper wall provided with annular grooves B² forming, between said grooves, an annular flange having

on its periphery a concave groove B', adapted to fit the outer surface of a ring and a lower roll provided with radial flanges C² entering the annular grooves B² in the upper roll and having the space between said radial flanges corresponding with the width of said concave groove B', whereby the ring to be enlarged is held from lateral displacement, and having between said radial flanges a cylindrical surface C³ to bear upon the inside of the ring, substantially as described.

2. In a machine for enlarging jewelers' rings, the combination of an upper roll, provided with a projecting surface bearing upon the outer surface of the ring to be enlarged, a lower roll provided with screw threaded sections, and flanged nuts carried upon said screw threaded sections and inclosing the ring, whereby it is held from lateral displacement, substantially as described.

Dated at Worcester, in the county of Worcester and State of Massachusetts, this 31st day of May, 1890.

JOHN C. ROCHELEAU.

Witnesses:

RUFUS B. FOWLER,
H. M. FOWLER.