(No Model.)

J. ROVENSKY.

MEANS FOR ORNAMENTING GLASSWARE.

No. 537,125. Patented Apr. 9, 1895.

Fig. 1.

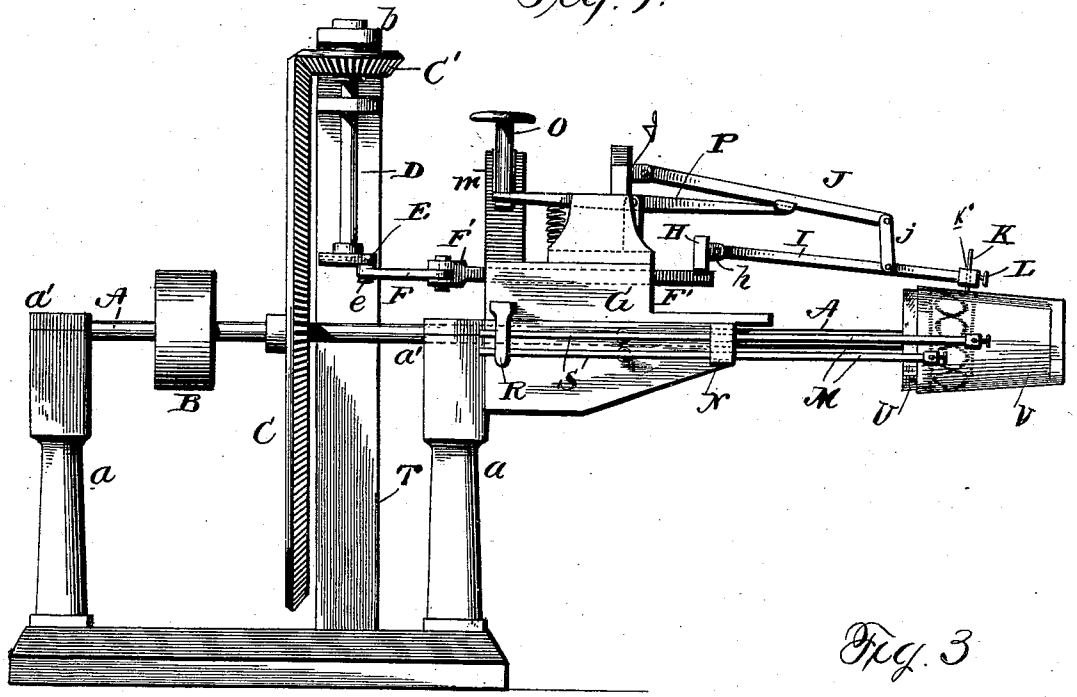
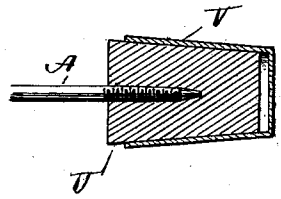


Fig. 3



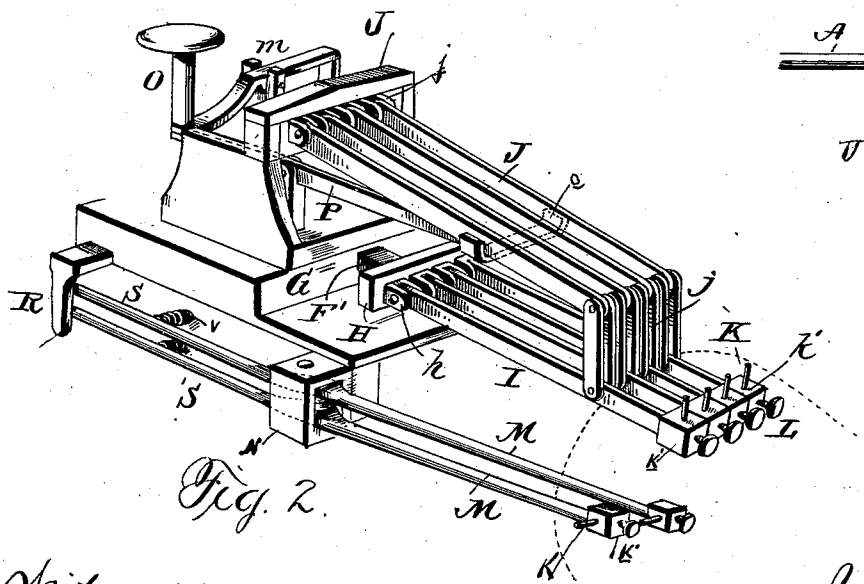


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN ROVENSKY, OF JEANNETTE, PENNSYLVANIA.

MEANS FOR ORNAMENTING GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 537,125, dated April 9, 1895.

Application filed January 10, 1895. Serial No. 534,484. (No model.)

To all whom it may concern:

Be it known that I, JOHN ROVENSKY, a citizen of the United States, residing at Jeannette, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Means for Ornamenting Glassware; and I do 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 of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in ornamenting curved glass surfaces, and the object of this invention is to add scroll work to tumblers, lamp chimneys or other articles having convexed surfaces, by means of causing a wire to be held in contact with the curved surface of the glass, as the latter revolves, the said wires being caused to reciprocate, causing a wavy surface to be outlined thereby.

The further object of the invention resides in having the article to be ground held on the end of a suitable spindle and to revolve in a solution of emery or fine sand, and having arms which hold steel points or wires which are caused to reciprocate and form a curved scroll while other steel points are fixedly held against the curved surface while the glass revolves, thus producing straight bands about the glass, tumbler or other device being engraved.

To these ends and to such others as the invention may relate the same consists further in the novel construction, combination and adaptation of parts as will be hereinafter more fully described, and specifically defined in the appended claims.

My improved process is clearly illustrated in the accompanying drawings which, with the reference marks thereon, form a part of this specification, and in which similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of the machine which I employ in carrying out my process of glass ornamentation. Fig. 2 is a perspective view upon an enlarged scale of the principal portion of the machine, showing the wire carrying levers and mechanism employed in releasing the same from the surface of the glass. Fig. 3 is a sectional detail taken through the glass holding block and glass thereon.

Reference now being had to the details of the drawings by letter, *a*, *a* designate two standards in the upper ends of which is journaled a shaft A carrying a pulley B to which power may be applied from any suitable source, for rotating the shaft. A crown wheel C is keyed to the shaft a short distance from the pulley, and with the gear teeth upon said wheel C mesh the teeth of the beveled pinion C′ upon the upper end of the shaft D which shaft D is suitably journaled in bearings carried by the upright T. At the lower end of the shaft D is provided a disk E to which is attached by a suitable wrist-pin *e* one end of a pitman F, the other end of which is pivoted to the end of a cross-head H.

I, I are metallic bars or rods which at their inner ends are pivoted between ears or projections *h*, *h* provided upon the outer face of the cross-head H. The free ends of the bars I are provided with enlarged portions *k*′, through which are passed short vertical wires K, said wires being secured in place and rendered capable of adjustment by means of set screws L, as will be readily understood.

J, J, are levers which at one of their ends are pivoted between ears *j*, while their opposite ends are pivotally attached to the upper ends of the links *j*, the lower ends of which are pivotally attached to the levers I, as shown clearly in Fig. 2 of the drawings.

P is a lever pivoted at a point between its ends as shown and carrying at one of its ends a cross bar *o* which normally bears against the lower faces of the levers J, while at its opposite end is provided a suitable push rod O, by means of which the said end of the rod P may be depressed when it is desired to raise the free ends of the levers I, with their wires, as will be readily understood.

U is a block of cork or other suitable material, carried upon the end of the shaft A. The size and form of this block are such as to conform to the tumbler or other article of glassware to be ornamented, and when in po-

sition the glass will thus be rotated directly beneath the wires K which are held in contact with the glass V, by the levers I, as shown.

M, M are rods or bars which are pivoted at substantially their longitudinal centers within a lateral extension N at the side of the machine. These rods or bars are provided at their free ends with enlargements *k'* within which are held wires K, similar in all respects to the wires K and securing means described in connection with the levers I.

Spiral springs *v* are provided between the frame of the machine and the levers or rods S, at points near the inner ends of the rods. The tension of these springs tends to throw the inner ends of the rods outward, thus forcing the wires carried at the free ends of the rods, into contact with the glass being ornamented, while a suitable stop R at the extreme inner end of the rods limits the outward movement of the same.

It will be seen that by the construction above described, the wires which are carried at the ends of the levers I, will bear upon the upper face of the glass which is being rotated upon the end of the shaft A, and that the reciprocating movement that is imparted to said levers will cause the wires to describe spiral outlines upon the surface of the glass, while the wires carried by the levers M being held at fixed points will describe a band extending directly around the glass. It will also be understood that by varying the throw of the cross head carrying the levers I, the form of the spirals described by the wires carried by the levers may be varied.

It is my purpose to supply either fine emery or sand, in a dampened condition to the surface of the glass, as it is rotated, and this substance coming between the glass and wires causes the grinding into the surface of the track outlined by the wires in their contact with the glass. The emery, or sand may be applied to the glass in any way that may suggest itself to the operator as the most practical or simple, no special device for accomplishing it being necessary.

From the foregoing description the operation of the machine will be readily understood. It will be seen that when it is desired to remove the glass from the block upon which it is rotated, this can be accomplished readily by depressing the push rod O and simultaneously pressing inward upon the levers M, against the tension of the springs *v*, the effect of which will be to release the wires from contact with the glass.

It is at once evident that the machine which I have described is subject to many modifications and changes in construction without departing from the spirit of my invention; as for instance, the number of wires used, and the means employed for holding the same in contact with the rotating glass may be varied, as the requirements of the work to be done might require, or the taste of the operator might dictate.

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

1. In combination in a curved surface tumbler ornamenting machine a revoluble spindle A, designed to carry a tumbler, a series of levers I, pivoted at their inner ends to a cross head H, their outer free ends adapted to carry steel points K, the levers J pivoted at their rear ends to a stationary standard, the links *j* connecting the outer ends of said levers J to the levers I and means for reciprocating the cross head, substantially as shown and described.

2. In combination, the cross head H, mounted in a suitable framework and designed to reciprocate the levers I, the wires K carried therein, the levers J having their rear ends pivoted to a fixed standard, the links *j* pivoted to the forward ends of the levers J and to the levers I, the tilting lever P having its free end resting against the under surface of the levers J, its rear end connected to a push button, the spring actuated levers M carrying steel points, and means for operating the machine, all substantially as shown and described.

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

JOHN ROVENSKY.

Witnesses:
FRANK ELSNIC,
W. C. LOOR.