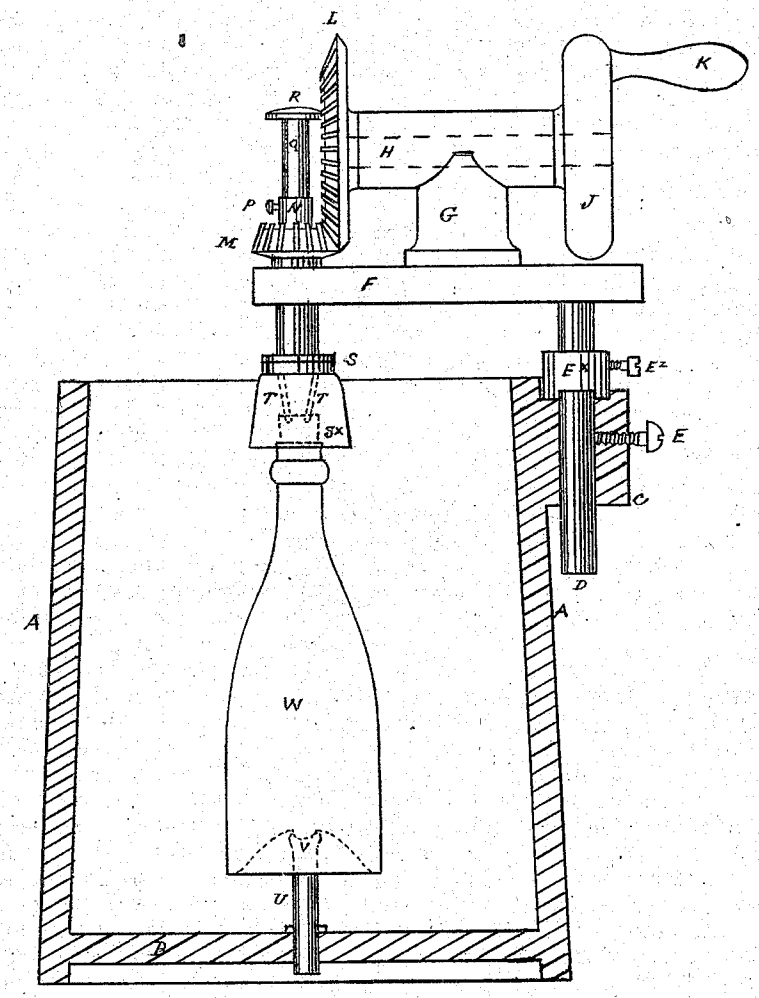
J. R. WHIPPLE.

Coolers for Wine.

No. 136,632. Patented March 11, 1873.



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UNITED STATES PATENT OFFICE.

JOSEPH REED WHIPPLE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN COOLERS FOR WINE.

Specification forming part of Letters Patent No. **136,632**, dated March 11, 1873.

To all whom it may concern:

Be it known that I, JOSEPH REED WHIPPLE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Wine-Freezers, of which the following is a specification:

Nature and Object of the Invention.

The nature of my invention consists of certain attachments to the ice-containing tub used to freeze or chill wine in bottles, by which the bottle is supported and held at top and bottom while another device effects a rapid rotation of the same; and the object is to shorten the time of freezing a bottle of wine, and to effect that purpose more thoroughly.

Description of the Drawing.

The drawing represents a side view of the bottle placed in the machine and supported in the way I have devised, with the ice-containing tub in vertical section; also, a side view of the wheels, crank, &c., by which the rotation of the bottle is effected.

Description of the Invention.

In the drawing, A A are the sides of a cylindrical tub placed perpendicularly, without a cover, and with a bottom, B. C is a horizontal projection (called the standard-projection) from one side of the tub, near the top, bearing a perpendicular cylindrical hole. Down through this hole passes the shaft D, of metal, which shaft (called the standard-shaft) is held, when in place, firmly fixed to the projection C by means of the set-screw E. The shaft D proceeds downward from the under side of the slab of metal F, to which it is firmly attached at a point near the right-hand end of the same. At a point just below the slab F the shaft D bears a collar, E^x, fastened by a set or thumb screw, E^z. This collar E^x has two downward projections from its lower surface, (seen in the drawing,) which fit into corresponding apertures in the projection C. These prevent any rotation of the shaft D. The slab F extends horizontally to the left over the top of the tub A A to a point a little way beyond the center of the same, and bears, at a short distance from its right-hand end, a standard, G, of shape as seen in the drawing, which standard, at its upper portion, has a horizontal cylindrical perforation, which forms the bearing of the working-shaft H, (dashed lines.) This shaft H bears at its right-hand end a fly-wheel, J, which carries a crank-handle, K. At its left-hand end the shaft H bears a bevel cog-wheel, L, which gears below into a bevel cog-wheel, M, of one-third the diameter of L, or thereabout, at right angles to it, which wheel M is borne by the slab F by means of the hollow cylinder attached to its lower surface, which fits into a hole or bearing in the slab, and is so placed that its center perpendicularly is coincident with the center of the tub A A. The wheel M carries on its upper surface a collar, N, furnished with a set-screw or thumb-screw, P. (I sometimes also have upon the lower end of the bearing-cylinder of the wheel M a collar below the slab F to prevent the wheel M rising.) Through the center of this collar N and the wheel M passes loosely up and down, except when fastened by the set-screw P, the spike-shaft Q, carrying a button, R, at its top and at its bottom a circular disk, S, from the lower surface of which project downward two, three, or more spikes. Two only, T T, are seen in the drawing. The disk S also bears, firmly fastened to and hanging from it, the frustum of a hollow cone, S^x, whose axis is coincident with that of the spike-shaft Q, and which surrounds the spikes T T and the cork of the bottle operated on. U is the holder-shaft, being a rod of metal perpendicularly disposed, fastened, by the collar and nut below, (seen in the drawing,) to the bottom of the ice-tub A A at its center. This holder-shaft U bears at its top a cup-shaped attachment, V, with its concave side uppermost. W is the bottle, holding its champagne or other wine to be operated on.

Operation of the Invention.

I place the bottle W with the nipple in the dimple at its bottom fitting into the cup-shaped attachment V. Then, taking the slab F and its attachments, I insert the shaft D into the aperture of the projection C and screw up the set-screw E; also, the one E^z attached to the collar E^x. I then, by striking upon the button R, drive down the spike-shaft Q, thus causing the spikes T T to enter the cork of the bottle while the hollow cone S^x surrounds the cork, the combined device thus holding the bottle perpendicular. I then tighten the set or thumb

screw P, thus holding the spike-shaft Q in place. When I have under action a half-bottle I drive the spike-shaft Q down further, securing it by the set-screw P, as before mentioned. I then place in the vessel or tub A A the mixture of ice and salt commonly used for artificial freezing. I then, by means of the handle K, rotate the fly-wheel J with its shaft H and bevel-wheel L, thus rotating with greater rapidity the small bevel-wheel M, the spike-shaft Q, and the spikes T T. By means of these latter the bottle W with its contents is rotated, thus exposing the same to the action of the freezing-mixture. When the congelation has proceeded to a sufficient extent (which will be, rotating the fly-wheel, say, fifty or more times the minute, in a period of, say, five to seven minutes, instead of thirty or forty minutes as with the old devices,) I loosen the set-screw E and remove the slab F and its attachments; then, removing the bottle, I substitute another, and the process goes on.

The main features of my device are these: I use an ice-and-salt-containing vessel, in which the article to be frozen is placed, and, by means of entire or partial rotation, is submitted to congealing action. I claim nothing on this feature. But I obtain by my combination of devices, in the first place, a rapid rotation of the bottle containing the liquor to be frozen, and thence a rapid freezing of the same; second, a ready and effectual mode of adapting my combination of devices to the article submitted to its operation; and, third, an easy mode of removing my completed product and the substitution of another article for the action of my devices.

Claims.

I claim—

1. The combination and arrangement of the tub A A, the slab F, the shaft Q, and the devices for its rotation and securing the bottle to it, with the holder-shaft U, all substantially as described.

2. The combination and arrangement, with the above-named devices, of the holder-shaft collar N with its set-screw P, the spikes T T or their equivalent, whether with or without the cone S^x, all substantially as described.

3. The combination and arrangement of the devices mentioned in the first claim with the standard-shaft D and the standard-projection C, all substantially as described.

JOSEPH REED WHIPPLE.

Witnesses:

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