C. J. RENZ.

Apparatus for Preserving Grapes and other Fruit.

No. 223,759. Patented Jan. 20, 1880.

Fig. 1.

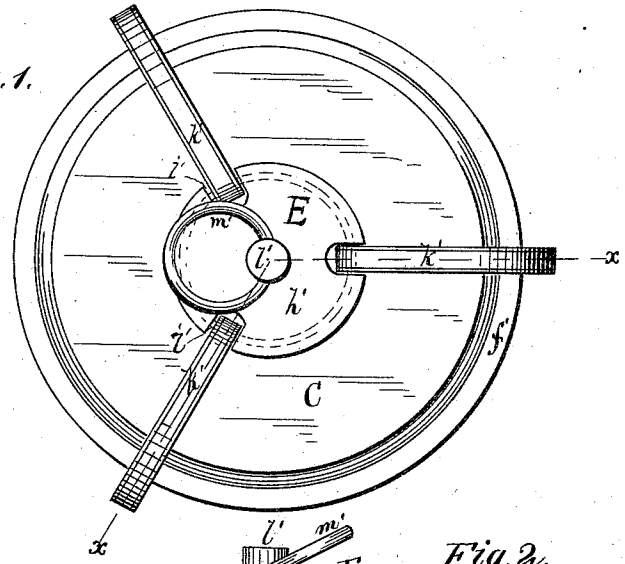


Fig. 2.

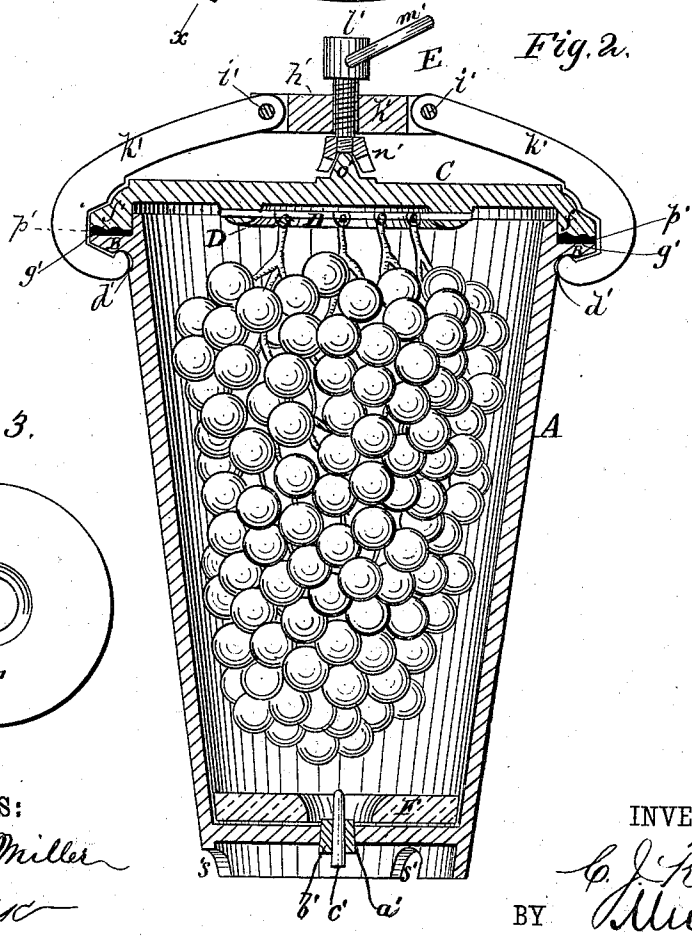
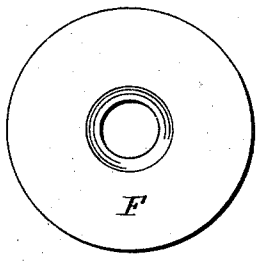


Fig. 3.



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CARL J. RENZ, OF HUDSON, NEW YORK.

APPARATUS FOR PRESERVING GRAPES AND OTHER FRUIT.

SPECIFICATION forming part of Letters Patent No. 223,759, dated January 20, 1880.

Application filed March 21, 1879.

To all whom it may concern:

Be it known that I, CARL J. RENZ, of Hudson, in the county of Columbia and State of New York, have invented a new Apparatus for Preserving Grapes and other Fruit, of which the following is a specification.

Figure 1 of drawings shows a plan view; Fig. 2, a sectional elevation. Fig. 3 is a plan of the absorbing-disk.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a simple and efficient apparatus for preserving fruit by creating a partial vacuum or a rarefaction of the air in a vessel especially designed for the purpose, and by furnishing, in combination with this, a medium for the absorption of what dampness or moisture may emanate from the fruit.

I employ the vessel A, through the bottom of which is a central opening, *a'*, that at times is closed by the perforated stopper *b'*, the hole in which may in turn be filled by the plug *c'*.

Encircling the vessel near its top is the flange B, and at its junction with the vessel is the groove *d'*, formed partly in the vessel and partly in the under side of the flange itself.

The cover C' of the vessel is made with a downward-projecting rim, *f'*, that shuts down on the flange B, and the under surface of the rim is furnished with one or more annular grooves, *g' g'*.

A ring, D, furnished with holes, from which the fruit to be preserved is suspended, is secured to the inner face of the cover; but in place of this, staples, screw-hooks, or the like may be employed.

The cover is pressed down and held in place by the adjustable fastener E, which consists of a disk, *h'*, with a grooved edge, in which is fastened a wire, *i'*, from which hang suspended three or more hooks, *k'*, whose inner curves are shaped to conform to the outlines of the rim of the cover, the flange of the vessel, and the groove *d'*. Free motion is permitted to these hooks by notches cut in the disk *h'* at their points of suspension on the wire.

Through the center of the disk is the screw *l'*, in whose upper end is the ring *m'*, and on whose lower end is a boss or cap, *n'*, that is designed to increase the pressure-surface of the screw when it is screwed down upon the cover of the vessel. The cover may be provided with a slight central projection, *o'*, as shown, to receive the downward pressure of the screw.

The process consists in heating the vessel, which is preferably made of glass or glazed earthenware, to a temperature of 130° to 140° Fahrenheit, or thereabout, meanwhile securing the fruit that is to be preserved to the inside of the cover. Then the vessel is withdrawn from the oven, the absorbing-ring F is placed in its bottom, and the perforated stopper *b'* placed in the opening *a'*. A rubber gasket or its equivalent, *p'*, is then placed upon the flange B, the fruit lowered into the vessel, the fastener E set in position, and the screw *l'* turned down until the cover is pressed so tightly as to make its joint with the flange practically air-tight, and as a moderate pressure squeezes the gasket into the grooves *g' g'* of the cover, this is easily accomplished. Then the plug *c'* is inserted in the stopper *b'*, and the vessel, with its contents, is removed to a cool cellar or other place. It is preferable to apply this process to fruit immediately after it has been plucked.

The absorbing-ring F is made of burnt or dried clay, plaster, or the like, and serves as an absorbent of what moisture escapes from the fruit after it is placed in the vessel. Care must be taken that it be of some nearly or quite odorless substance that will not impart a flavor to the fruit.

In conducting this process on a large scale it may be preferable, instead of making use of heat to diminish or rarefy the air in the vessel, to apply an air-pump to the orifice *a'* after the fruit is in the vessel, and by this means accomplish the desired object.

Should there be any appearance of mold or mustiness at any time about the fruit, the vessel may be ventilated by the withdrawal of the plug *c'*. The ring *m'* serves as a handle in screwing down the screw *l'* and for carrying and hanging the vessel.

To admit air about the bottom of the vessel when set on a shelf, its sides are prolonged below its bottom, and have several openings, *s' s'*, made in them.

By this process and apparatus grapes freshly plucked from the vines have been preserved for six months or more without any discoloration or change in appearance of either the fruit or their stems.

The process may be applied to large or small vessels, and it affords to house-keepers a most simple and economical method of keeping fruit through the winter season.

With respect to the means for securing the cover of the vessel, I would state, in defining this part of my invention more clearly, that I am aware of English Patent No. 1,491 of 1862, in which the cover of a fruit-jar is secured by a screw connected with jointed arms engaging with the under side of the flange of the jar. In such case, however, the arms being jointed vertically above the flange of the jar, the strain of the screw in securing the cover is parallel with the longitudinal axis of the jar, and hence liable to break off the flange of the jar.

My invention is characterized by the following distinct features and advantages: The arms *k'* being pivoted directly to the disk *h'*, and the latter being made of less diameter than the mouth of the jar, the said arms occupy an oblique position to the longitudinal axis of the jar, and when the strain is applied in this direction the curve of the mouth of the jar forms an arch or truss between the arms *k'* that enables the mouth of the jar to better withstand the breaking strain.

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

1. The within-described fruit-preserving vessel, provided with a bottom central opening, *a'*, flange B, groove *d'*, and cover C, having a grooved rim, *f'*, and ring D, in combination with the stopper *b'*, plug *c'*, and fastener E, substantially as and for the purpose specified.

2. The combination of the cover C, the screw *l'*, and the disk *h'*, made of less diameter than the cover or mouth of the jar, and provided with the jointed hooked arms K', substantially as and for the purpose described.

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