No. 723,496. PATENTED MAR. 24, 1903.

G. E. STADTEGGER.

CRYSTALLIZING PROCESS.

APPLICATION FILED DEC. 5, 1902.

NO MODEL.

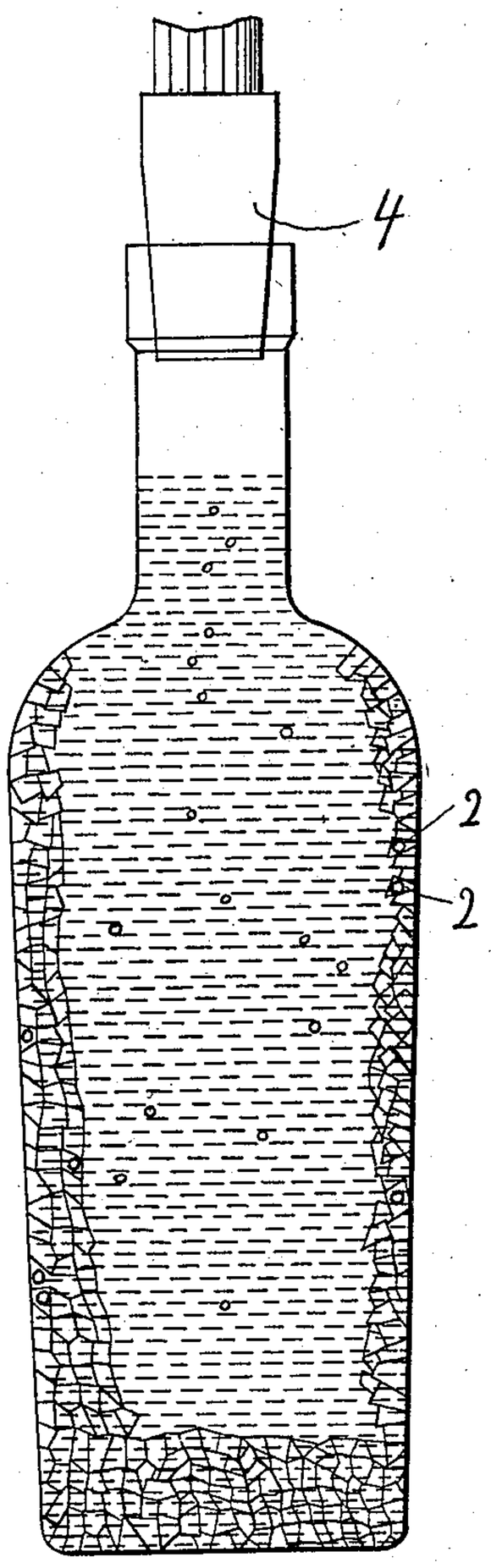

Fig 2.

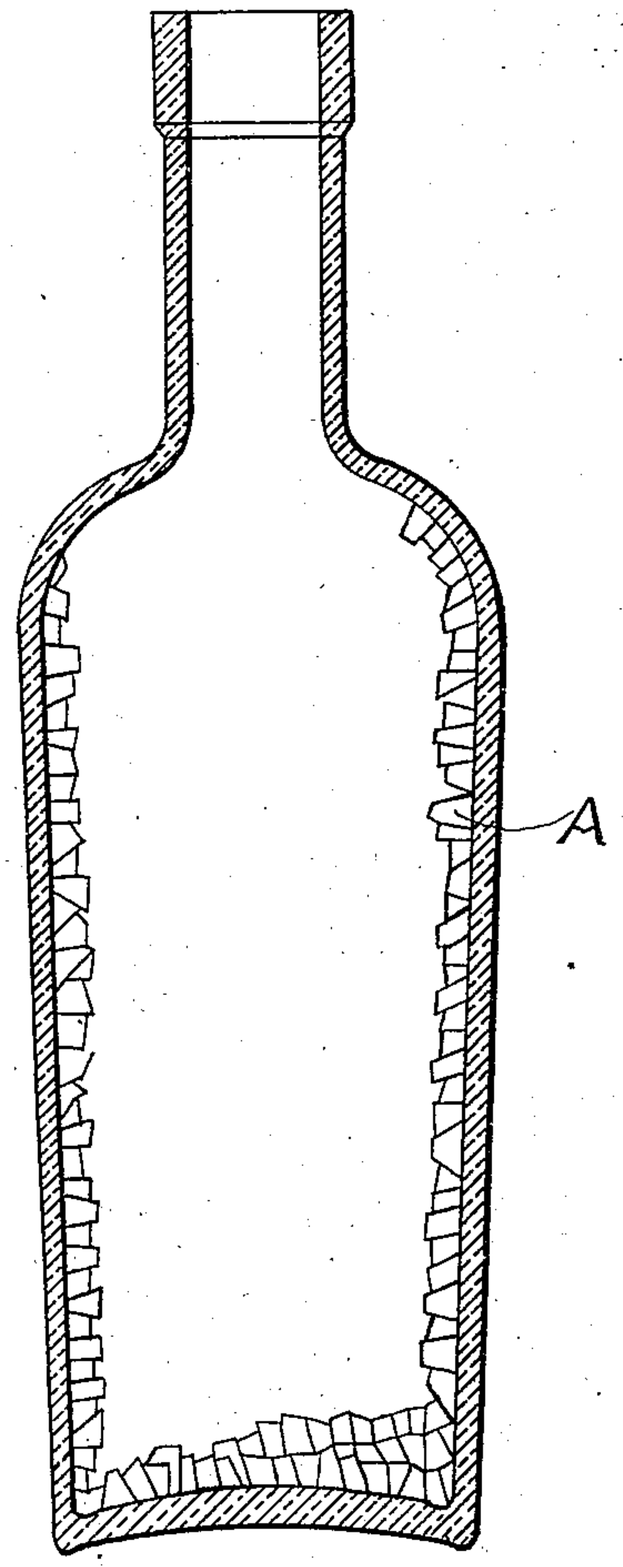

Fig 1

WITNESSES:

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GEORGE EDMOND STADTEGGER, OF SAN FRANCISCO, CALIFORNIA.

CRYSTALLIZING PROCESS.

SPECIFICATION forming part of Letters Patent No. 723,496, dated March 24, 1903.

Application filed December 5, 1902. Serial No. 133,971. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE EDMOND STADTEGGER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Crystallizing Processes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a process for crystallizing rock-candy and the like within bottles in which it is desired to produce an inner cystalline coating previous to the filling of the bottles with liquor. It is designed for the preparation of liquors in the form known as "rock-and-rye" or similar compounds.

My process consists in the production of a thin coating of coarse granulated sugar adhering to the inner walls of the glass bottles and in filling the bottle with a thick saturated saccharine liquid, so that the crystals of said liquid will be more readily and evenly started upon the roughened surface thus produced, and also in removing air-bubbles from the crystalline surface.

In the drawings, Figure 1 is a view of a bottle, showing the crystallization commenced upon the inner surface thereof. Fig. 2 shows the bottle and a connection which may be made with a vacuum-producing apparatus.

It is well known that crystals can be more easily commenced by having a guide or rough surface upon which to start, and in the forming of such crystallization upon the interior of glass bottles it is difficult to evenly start the crystallization and to make it symmetrical and attractive when finished.

In order to carry out my process, the bottles are first made perfectly clean and free from all dampness. The bottle is then rinsed out with boiling syrup, which must be of a gluey or sticky nature. The bottle is then immediately drained of all superfluous rinsing-syrup, and I then introduce into the bottle with the aid of a funnel a suitable amount—say two ounces—of coarse granulated sugar of an even uniform size. The bottle is then quickly turned or revolved, so that the whole interior will be covered with this coarse granulated sugar, as shown at A, Fig. 1. This granulated sugar will stick to the sides of the interior of the bottle on account of the adhesive nature of the heavy syrup with which the interior was coated, and the cooling and quick drying of the syrup previously introduced make it necessary to perform this part of the operation very quickly, so as to prevent contraction, as the boiling syrup would otherwise run into streaks and prevent an even coating being obtained. The coated bottles are now allowed to stand from twelve to twenty-four hours for drying, the temperature being not material. When dry, the coarse granules or crystals of the sugar are securely adherent to the interior of the bottle-wall and are evenly distributed over the entire surface. The bottles are now ready to be filled with a liquid of lighter specific gravity than the syrup, such as alcoholic liquids. It is necessary that this liquid should be saturated with an excess of sugar and not oversaturated. The liquid therefore when made should hold the excess of sugar in suspension at least twelve hours before it begins to crystallize. This saccharine liquid contains approximately from 20° to 22° of alcohol and about 30° Baumé of syrup. This is filled into the bottles at a temperature of about 65° Fahrenheit, so as not to redissolve or interfere with the dried rinsing syrup previously employed. The bottles now being filled with the above liquid, numerous small bubbles of air will be found to be adherent to or contained within the coating of sugar which was previously dried upon the interior wall of the bottle, these air-bubbles being shown at 2, Fig. 1. In order to remove this air, so as to allow an even crystallization and improve the appearance, I connect the bottles after filling them with the saccharine-liquid contents with a vacuum-pump or other air-exhausting device by means of a rubber tube or other attachment, as at 4, forming a tight joint with the interior of the bottle-neck, and the air being then exhausted the bubbles formed in the interior of the bottle will become detached and will rise through the liquid and be removed by the vacuum-pump. The apertures formed by thus releasing these small air bubbles or globules will then become filled with the saccharine liquid, which will soon close the apertures by reason of the natural tendency of crystallization. The bottles are then allowed to stand for a week, more or less, to allow the saccharine liquor with which they are filled

to deposit and produce the after-crystallization, which will soon form even deposits all over the surface and present the attractive appearance which is desirable in this class of goods.

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

The process of producing crystals in the interior of bottles, consisting in first coating the interior of bottles with a heavy boiling syrup, then coating said surface with granular or crystalline sugar, and allowing the bottles to stand until dry, then filling the bottles with a cold alcoholic saccharine liquid, then producing a vacuum within the bottles whereby air-cells in the crystalline surface are broken and the air expelled and afterward allowing the contained liquor to crystallize upon the surface thus produced.

In witness whereof I have hereunto set my hand.

GEO. EDMOND STADTEGGER.

Witnesses:

R. HUTCHING,

H. FACTOR.