

No. 829,547.

PATENTED AUG. 28, 1906.

R. SCHWARZENBACH.
BOTTLE SOAKING TANK.

APPLICATION FILED SEPT. 14, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

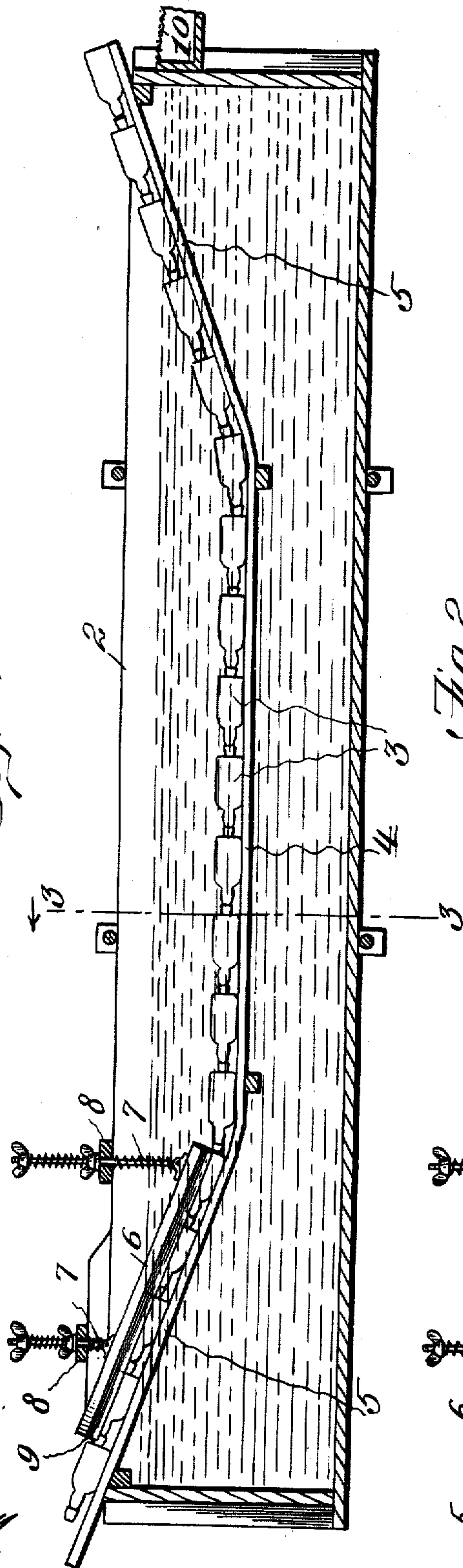
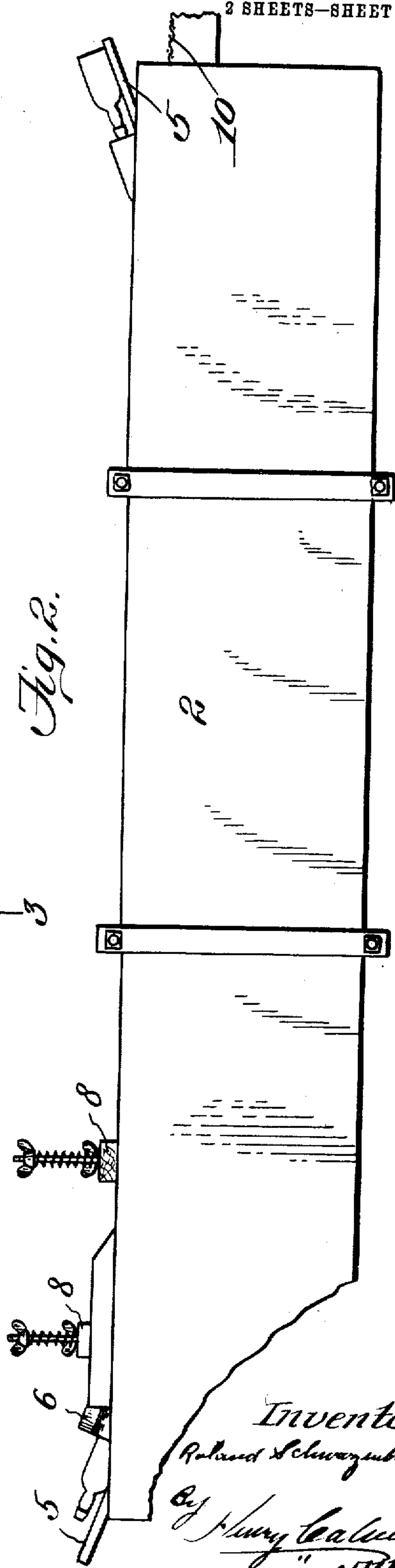


Fig. 2.



Witnesses:

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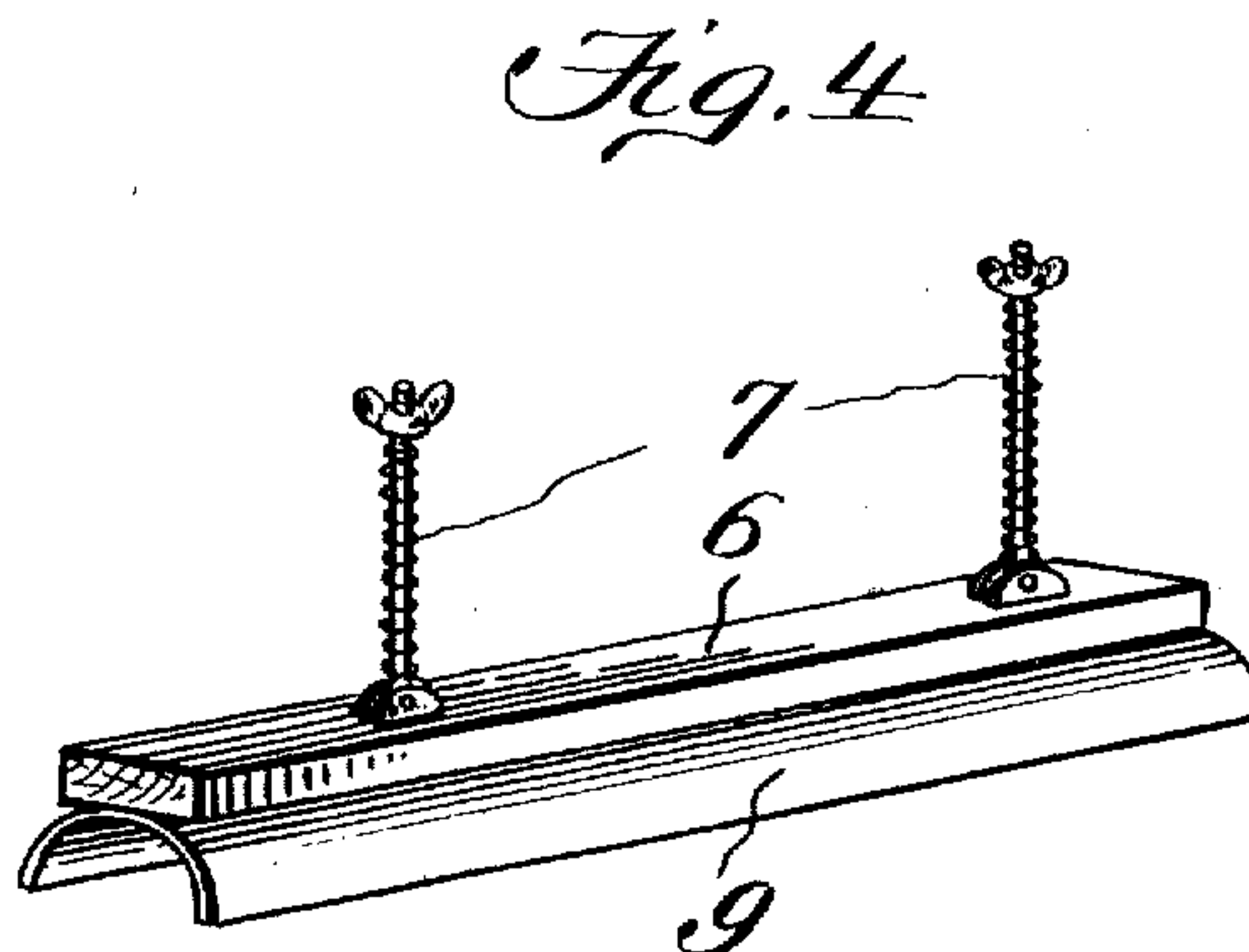
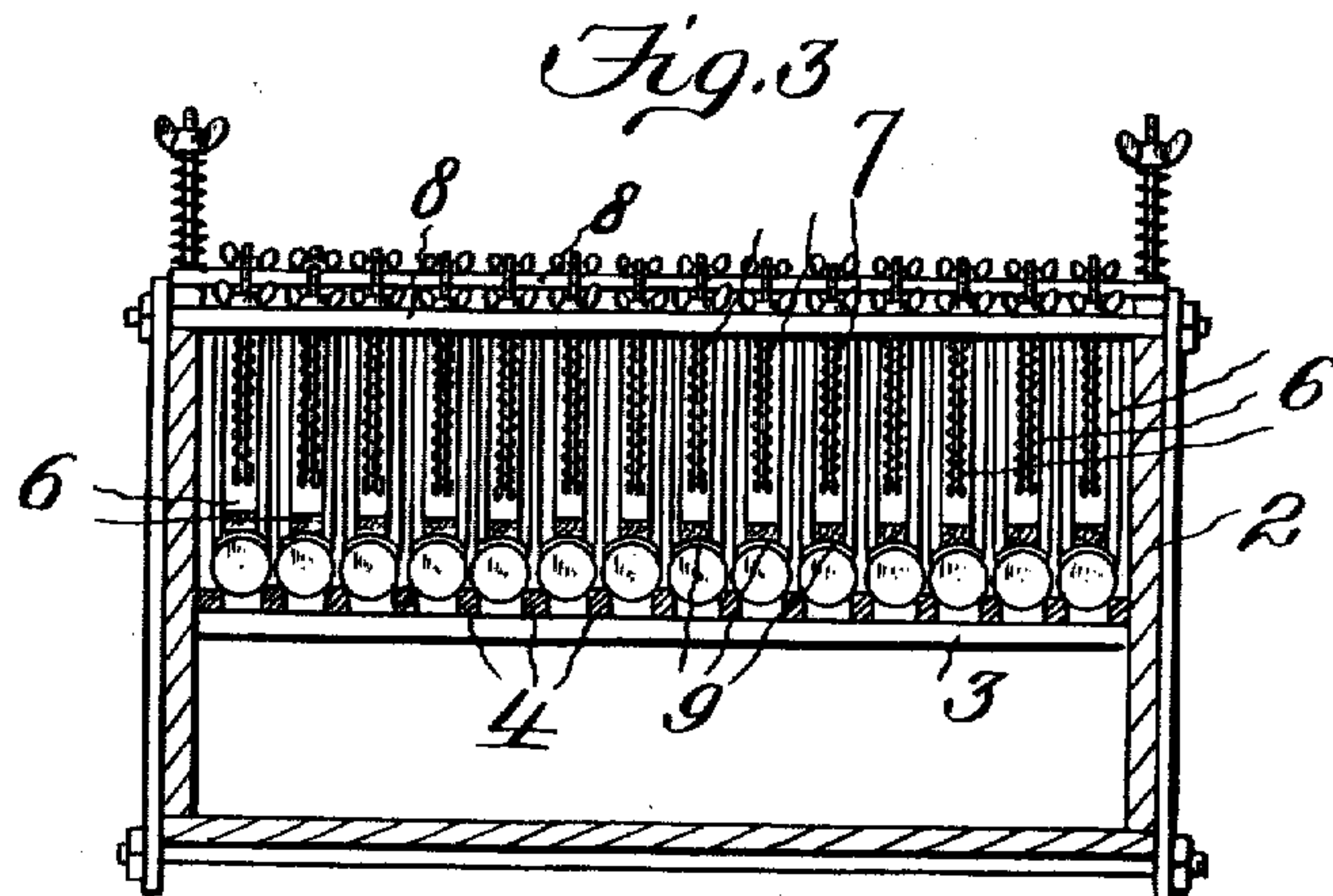
By Henry Calver
" Atty

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROLAND SCHWARZENBACH, OF HORNELLSVILLE, NEW YORK.

BOTTLE-SOAKING TANK.

No. 829,547.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed September 14, 1905. Serial No. 278,451.

To all whom it may concern:

Be it known that I, ROLAND SCHWARZENBACH, a citizen of the United States, residing at Hornellsville, in the county of Steuben and State of New York, have invented or discovered certain new and useful Improvements in Bottle-Soaking Tanks, of which the following is a specification, reference being had therein to the accompanying drawings.

The present invention relates to bottle-soaking tanks for use in brewing or bottling establishments where it is customary and necessary to thoroughly soak and rinse "empties" or empty bottles which have been returned for refilling in order that they may be cleansed both inside and out and the paper labels soaked off and removed preparatory to refilling and relabeling.

Generally stated, the invention comprises a tank or vat of any suitable proportions provided with a series of longitudinal stationary guides or guideways for the bottles to direct them in longitudinal rows through the tank, such guideways being inclined downwardly at the entering or feeding end of the tank, so that the bottles will readily fill with water, and the said guideways being inclined upward at the discharging end of the tank so that the water will readily run out of the bottles. The stationary longitudinal guideways are preferably formed in a rack the lowest part of which is some distance above the bottom of the tank, so that impurities can settle and sufficient room be afforded for free circulation of water, means being preferably provided at the downwardly-inclined entering end of the tank to hold the empty bottles down until they fill with water, as will hereinafter more fully appear.

In the drawings herewith I have illustrated one embodiment of my invention, and in said drawings Figure 1 is a longitudinal central sectional view of a tank embodying my invention. Fig. 2 is a side view of the tank, showing the end supports for the bottle-depressing frame at the feeding end of the tank. Fig. 3 is a transverse sectional view of the tank, taken on line 3 3 of Fig. 1, looking in the direction of the arrow. Fig. 4 is a detail perspective view of one of the bars or guides of the bottle-depressing frame.

Referring to the drawings by numerals, 2 denotes a tank or vat which may be of any suitable shape and dimensions, it having been found that a tank sixteen feet long by three feet wide and eighteen inches deep

forms a convenient and practicable size for soaking the ordinary bottles used by brewers in bottling their goods, although as this matter of proportion is one which may be varied widely to suit the convenience of the work it will be understood that I do not limit my invention to any particular dimensions. The said tank or vat 2 is provided with a supporting open-work rack or slatted bed 3 at a suitable distance below the top and above the bottom of the tank and below the surface of the water or cleansing fluid therein to insure the submergence of the bottles laid lengthwise upon the rack 3. The said rack 3 is constructed to provide a series of guideways or guides extending lengthwise through the tank and preferably formed by a series of spaced wooden slats 4, such as are shown in the drawings herewith, the guiding-rack thus formed being suitably supported by cross-bars, as shown. The guides comprised by the said rack 3 are inclined upwardly at the ends of the rack from the middle portion thereof, as shown, said inclined ends 5 extending above the surface of the water in the tank 2, as will be clearly seen from Fig. 1.

At the feeding end of the tank (the left-hand end in Fig. 1) above the inclined portion 5 of the rack 3 is provided with a correspondingly-inclined upwardly-yielding apron or frame 6, which is made up of a series of bars supported by means of adjustable and yielding bolts or hangers 7 from suitable cross-bars 8, adjustably and yieldingly mounted on the sides of the tank 2. The bars of this frame or apron 6 are preferably provided on their lower faces with half-round depressing-guides 9, which may be conveniently formed of tin or other thin sheet metal, so that when the bottles are fed in at the feeding end of the tank this yielding frame 6 will serve to guide them along the rack 3 and hold them down until they have been completely submerged and filled with water, after which of course the bottles will remain submerged of their own weight. The upwardly-yielding depressing-guides 9, which are preferably pressed down by springs, as shown, will accommodate themselves to bottles of somewhat different sizes and shapes.

In operation the workman will start the empties in at the feeding end of the tank 2, placing a row of bottles across the feeding-incline 5 of the tank with each bottle resting in a guideway formed by the separated slats or pipes 4 of the rack, and these rows of bot-

tles will be forced in under the holding frame or apron 6 by the succeeding row of bottles. As the workman feeds the bottles down beneath the apron 6 the bottles first inserted will be submerged and filled with water and will then be slowly pushed out by the succeeding bottles from beneath the frame 6 and through the tank over the slatted rack by the continuously-advancing lines of bottles fed in at the feeding end of the tank 2. In passing through the tank 2 the bottles will be subjected to a thorough soaking inside and out and when they reach the delivery end of the tank will have been thoroughly cleansed. The soaked and cleansed bottles will be forced up the inclined end 5 of the rack 3 at the delivery end of the tank, as will be obvious, and an attendant stationed there will remove them.

It will be observed that the bottles are fed into the tank bottom first, for the reason that this manner of feeding not only causes the bottles to fill with water more readily at the feeding end of the tank because there will be no cupping or inclosing of air therein, as might be the case if they were fed in neck first, but for the further and important advantage that as the bottles move up the inclined rack 5 at the delivery end of the tank they will be gradually drained and emptied, (see Fig. 1,) so that when removed by the attendant at the delivery end of the tank they are practically in condition for refilling, although, if desired, they may be further drained and dried out by stacking or placing them upon any suitable draining table or rack.

If desired, the delivery end of the tank may be provided with a receiving rack or grating 10, upon which the bottles will be caught if any of them are pushed out of the delivery end of the tank from the several continuous rows before the receiving attendant can remove them.

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

1. A bottle soaking and cleansing apparatus comprising a tank or vat provided with a series of longitudinal stationary guides by which the bottles may be directed endwise through the said tank or vat, said guides being inclined downward at the entering or feeding end of the said tank or vat and being inclined upward at the discharging end of the said tank or vat, so that the bottles will readily fill with water as they are entered into the said tank or vat and will be drained or emptied as they are forced toward the discharging end thereof.

2. A bottle soaking and cleansing apparatus comprising a tank or vat having therein an open-work rack above the bottom of the said tank or vat and constructed to provide a series of stationary longitudinal guides extending through the said tank or vat, said guides being inclined downward at the entering or feeding end of the said tank or vat and being inclined upward at the discharging end of the said tank or vat, so that the bottles will readily fill with water as they are entered into the said tank or vat and will be drained or emptied as they are forced toward the discharging end thereof.

3. A bottle soaking and cleansing apparatus comprising a tank or vat provided with a series of longitudinal stationary guides by which the bottles may be directed endwise through the said tank or vat, said guides being inclined downward at the entering or feeding end of the said tank or vat and being inclined upward at the discharging end of the said tank or vat, so that the bottles will readily fill with water as they are entered into the said tank or vat and will be drained or emptied as they are forced toward the discharging end thereof, the downwardly-inclined entering parts of said guides being partly composed of an overlying upwardly-yielding frame or apron having guiding parts, as *g*, to cause the empty bottles to be submerged.

4. A bottle soaking and cleansing apparatus comprising a tank or vat having therein an open-work rack above the bottom of the said tank or vat and constructed to provide a series of stationary longitudinal guides extending through said tank or vat, said guides being inclined downward at the entering or feeding end of the said tank or vat and being inclined upward at the discharging end of the said tank or vat, so that the bottles will readily fill with water as they are entered into the said tank or vat and will be drained or emptied as they are forced toward the discharging end thereof, the downwardly-inclined entering parts of said guides being partly composed of an overlying upwardly-yielding frame or apron having guiding parts, as *g*, to cause the empty bottles to be submerged.

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

ROLAND SCHWARZENBACH.

Witnesses:

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ALBERT J. WOELFEL.