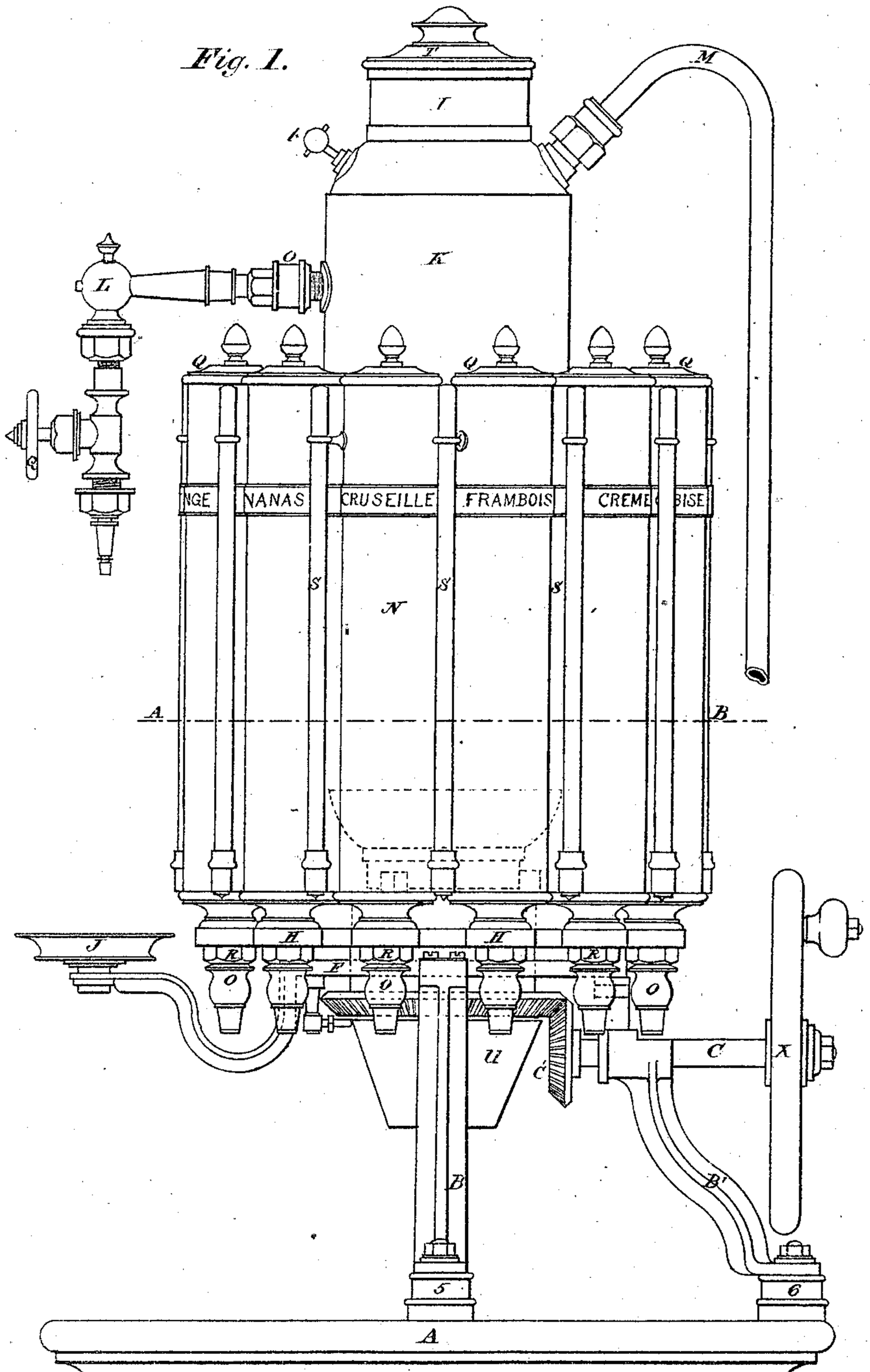
(1.) 3 Sheets--Sheet 1.

ANTOINE PICCALUGA.

Improvement in Apparatus for manufacturing Iced Cream and Soda Water.

No. 120,531. Patented Oct. 31, 1871.

Fig. 1.



Witnesses:

W. F. Ludlow

N. Gardner.

Inventor:

Antoine Piccaluga

By James L. Norris

Atty.

(1.) 3 Sheets--Sheet 2.

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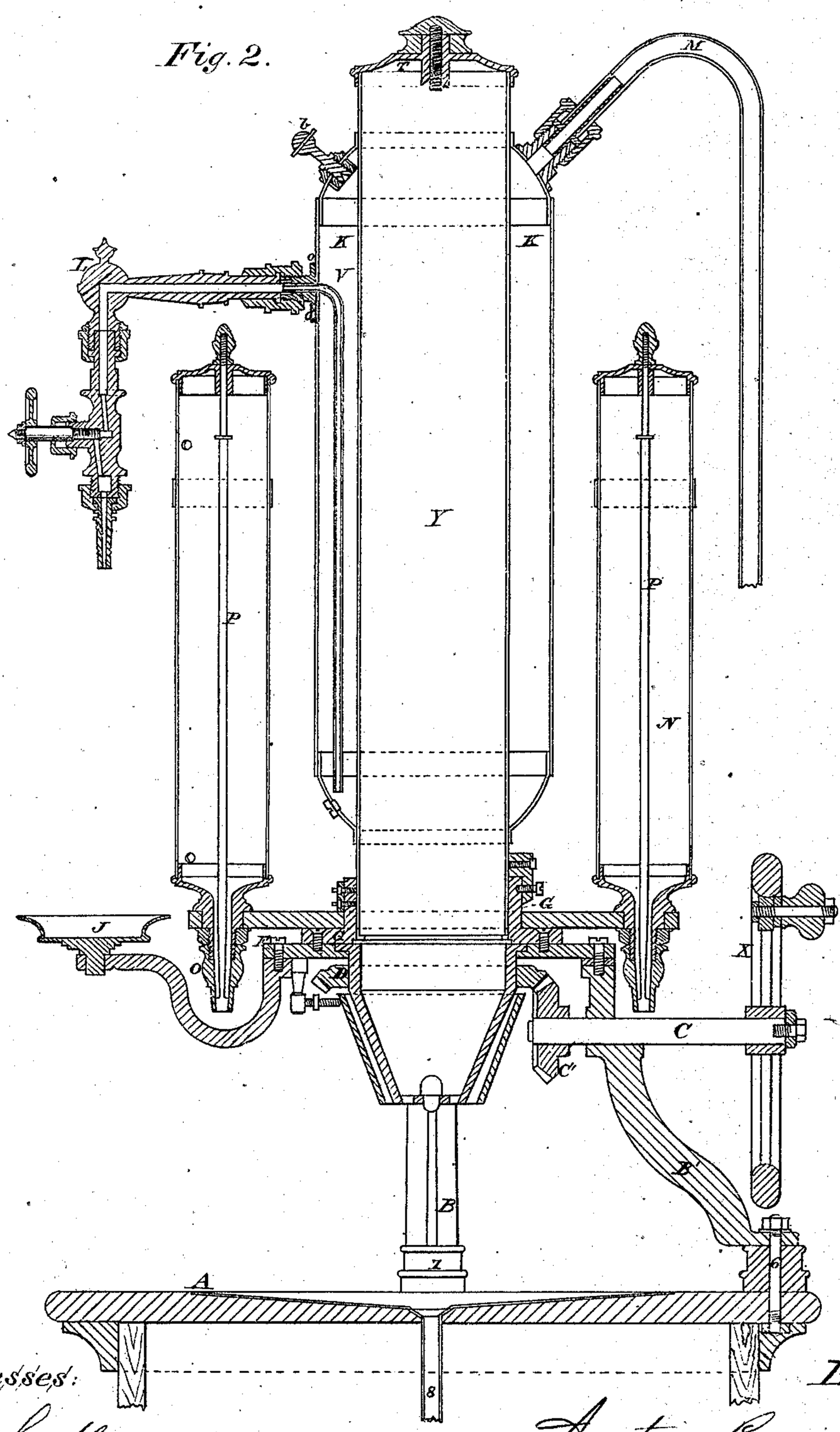
Fig. 2.



Witnesses:

W. C. Ludlow

M Gardner

Inventor:

Antoine Piccaluga.

By James L. Norris.

Atty.

(1.)

3 Sheets--Sheet 3.

ANTOINE PICCALUGA.

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Fig. 3.

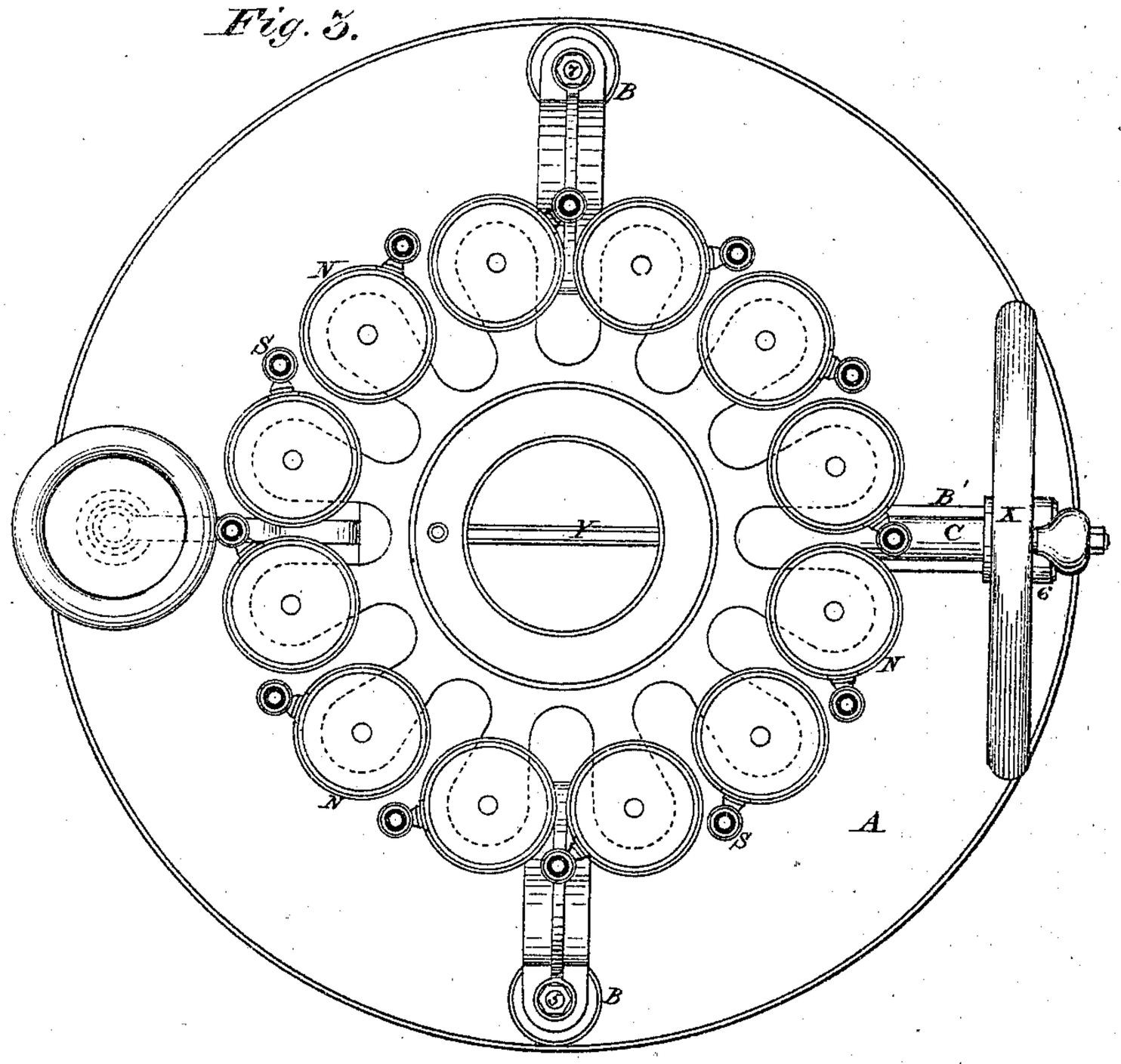


Fig. 4.

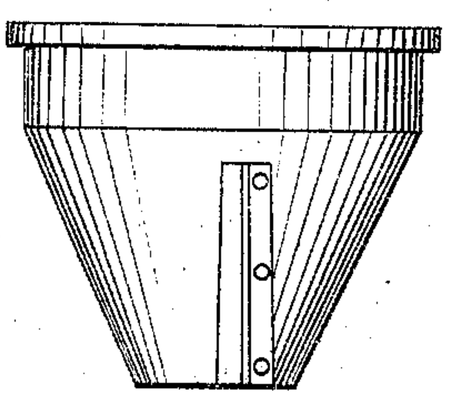


Fig. 5.

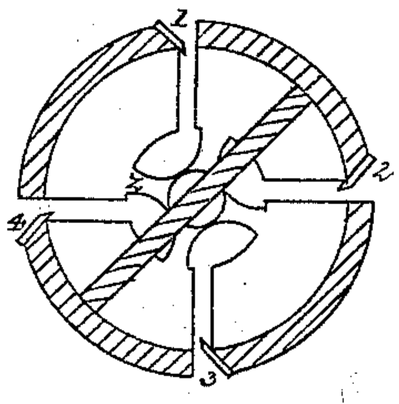
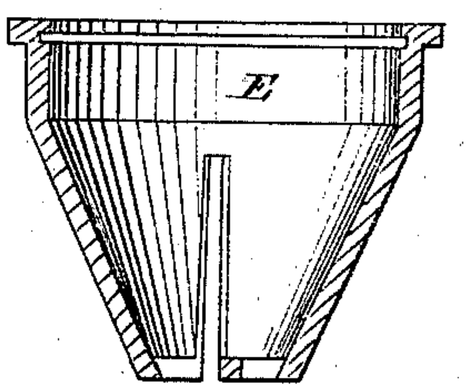


Fig. 6.



Witnesses:

W. J. Ludlow

M. Gardner.

Inventor:

Antoine Piccaluga,

By James L. Norris

Atty.

UNITED STATES PATENT OFFICE.

ANTOINE PICCALUGA, OF PARIS, FRANCE.

IMPROVEMENT IN APPARATUS FOR MANUFACTURING SIRUPS OR CREAMS AND SODA-WATER.

Specification forming part of Letters Patent No. 120,531, dated October 31, 1871.

To all whom it may concern:

Be it known that I, ANTOINE PICCALUGA, of Paris, in the Empire of France, have invented certain Improvements in Apparatus for Manufacturing Iced Sirup or Cream and Soda-Water Beverages, of which the following is a specification:

This invention relates to the manufacture of iced beverages consisting of soda-water flavored with sirup or cream; and the apparatus employed consists of a vertical double-cylinder recipient, the inner one for receiving the ice and the outer one for the reception of the soda-water. This latter cylinder is furnished with two tubes at the top, one for receiving the soda and the other for drawing off the soda-water by means of a tap. Round the external cylinder are arranged twelve vertical cylinders, (the recipients of the creams or sirups,) each of which is supplied at the base with a valve-cock for the exit of the liquid contained in the respective cylinders. These cocks are worked by aid of knobs at the head of each cylinder, to which are attached plated shafts, forming stoppers to retain the liquid until operated on. The excess of carbonic-acid gas escapes through a screw-valve at the head of the outer cylinder or soda-water recipient. The ice-cutter is conical, and is provided with four blades, actuated by a shaft and fly-wheel by means of bevel-wheels in connection therewith, causing the cutter to revolve. Beneath the cutter is a plated funnel for covering its end, as well as for the exit of the ice. The apparatus is mounted on a marble slab by means of supports bolted thereto, and in the center of this slab is an opening communicating with a tube for running off the waste liquor.

Figure 1 is an elevation of the complete apparatus. Fig. 2 is a vertical section of the same, following the longitudinal axis. Fig. 3 is a horizontal section following the line A B of Fig. 1. Fig. 4 is an elevation of the ice-cutter. Fig. 5 is a horizontal section of the same following the line C D of Fig. 2. Fig. 6 is a vertical section of the same.

A, Figs. 1, 2, and 3, is a white marble table, with conical opening and drain in the center supporting the whole apparatus. B B B′ are brass supports, one of which, B′, bears a muffle, forming a cushion to the brass shaft C. C is the brass shaft or axis, bearing a bevel-wheel of thirty teeth gearing with the bevel-wheel D. (See Figs. 1 and 2.) D is the brass bevel-wheel, of seventy-four teeth, screwed to the conical ice-cutter and causing it to revolve. E is the conical ice-cutter, of silver-plated brass, having four beveled openings for fixing the blades. (See Fig. 5.) F is a brass piece, screwed to the supports B by means of steel screws with cylindro-conical heads. This piece bears a support in the center, forming a fulcrum for the rotation of the conical ice-cutter E. G is a brass cap, screwed on the piece F by six conical-headed screws, and forms the center of rotation to the conical cutter E, which serves as center to the star-piece H, with twelve branches, revolving in the center of the piece G. On each of these branches a vertical cylinder is mounted, containing the cream or sirup. I is the ice-cylinder, of copper, lined internally with tin, and fitting at the lower end in the cap G. K is a copper cylinder, tinned inside, forming a case to the cylinder I, and serving as recipient to the soda-water. L is a brass silver-plated tap, mounted at the head of the cylinder K for the exit of the soda-water. M is a tin tube, serving to introduce the soda in the cylinder K. N are twelve cylindrical recipients, tinned inside and silver-plated outside, containing sirups, and fixed by screws to the twelve extremities of the star H. O are twelve conical cock-valves, silver-plated all over, and provided with India-rubber rundles. P are twelve copper shafts, silver-plated, traversing perpendicularly the center of the recipients N, and forming stoppers. These shafts are surmounted by heads or knobs. Q are twelve covers or lids, with raised parts in the center, serving as guides to the shafts. At the top two holes are pierced, one for introducing the sirup and the other for the escape of air. R are twelve nut-screws, serving to lock the ends of the recipients N on the branches of the star-piece H. S are twelve glass tubes or gauges, with silver-plated mounts screwed to the cylinders N, serving to measure the sirup or cream that is drawn off. T is a silver-plated cover to the ice-receiver I. U is a copper funnel, silver-plated, covering the end of the conical cutter E, and fixed to the piece F. V is a tin suction-tube in the interior of the soda-water recipient K, and screwed to the tap L within the joint *o*. *a* is a copper screw, serving to introduce the suction-tube V, and forming a hermetical joint by aid of a leather washer. *b* is a screw-valve, allowing, by means of an open-

ing therein, of the escape of the excess of carbonic-acid gas which collects at the top of the cylinder K. X is a fly-wheel for regulating the cutting of the ice, and is mounted on the brass axis C and held by a screw. 1 2 3 4 (see Fig. 5) are steel blades, mounted, with screws, in the open grooves of the conical cutter E. Y is a longitudinal partition, in zinc, in the center of the ice-cylinder I for dividing the ice. Z is a silver-plated plate, of V-shape, with pivot at the base of the cutter E, serving as check to the ice against the blades. (See Fig. 5.) J is a silver-plated table, fixed to the piece F by screws, on which to place the tumbler, below the soda-water tap L. 5 6 7 are copper bolts with nuts, uniting the supports B B B′ to the marble table. 8 is the tube for running off the waste-liquor, and is made with a joint and copper mount, and is capable of being lengthened, at will.

In preparing the apparatus for use, the tin tube M is connected to a recipient containing soda-water, and having a tap, which, being opened, the liquid is precipitated into the cylinder K; the valve *b* is then opened and the accumulated gas is allowed to escape, and the valve is then closed. The cylinders N are then supplied with sirup or cream, which is introduced through openings in the lids by aid of a glass funnel. The lid of the ice-cylinder is then raised, and it is filled with small pieces of ice in the two compartments; the lid is then replaced, and the apparatus is in working order.

In making use of the apparatus, a tumbler is placed beneath the funnel U, the fly-wheel X is turned and the ice falls in a snow-shower into the tumbler, which is then placed beneath one of the cream or sirup recipients N, and, on raising one of the knobs, a quantity of sirup or cream equivalent to the measure marked on the glass gauge S is allowed to pass out; the valve is then closed and the tumbler placed on the table J beneath the soda-water tap L, on turning which the soda-water is precipitated forcibly into the tumbler and the beverage is prepared; the tap is then closed.

I claim as my invention—

1. The combination of two cylinders, the inner one I for receiving the ice, and the other K for the reception of the soda-water, the latter cylinder being provided with a tube, M, for introducing the soda-water, and a tube and tap, L, for drawing off the liquid, and a valve, *b*, for the exit of the excess of carbonic-acid gas.

2. The combination, with the two cylinders, of the revolving star-piece H bearing the cylinders N for the reception of the cream or sirup.

3. The combination, with the ice-receiver I, of the conical revolving ice-cutter E, actuated by a thirty-toothed wheel, C, and a seventy-four-toothed wheel, D, by aid of the fly-wheel X.

A. PICCALUGA. [L. S.]

Witnesses:

A. CHARLES,

E. HÉBRÉ.

(1)