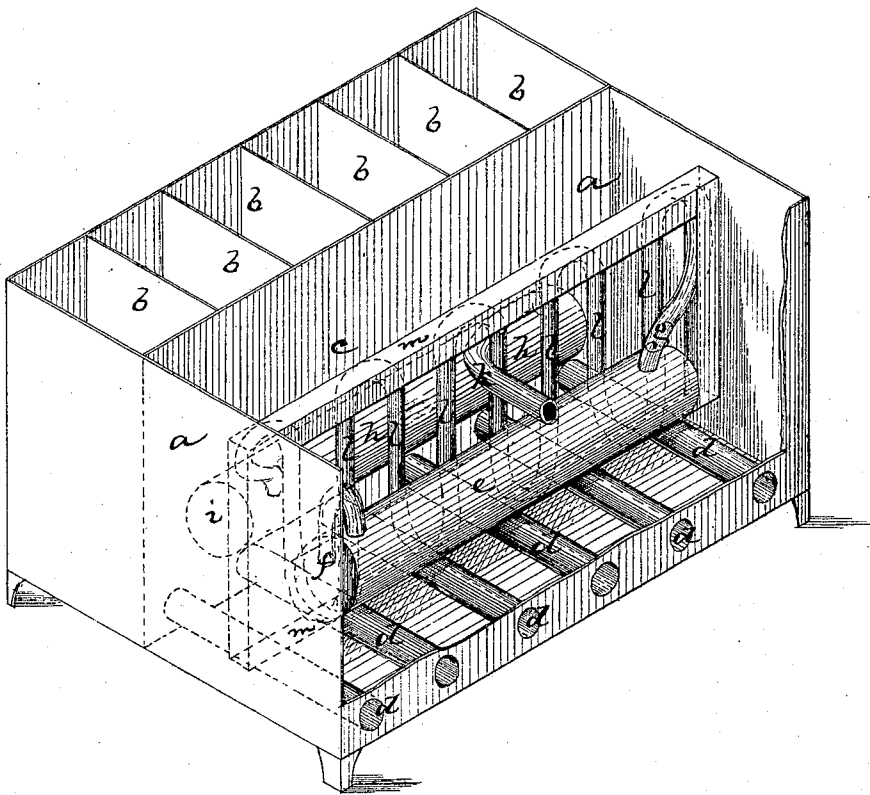


J. W. TUFTS.

Soda-Water Apparatus.

No. 136,345.

Patented Feb. 25, 1873.



Witnesses.
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S. B. Kidder.

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UNITED STATES PATENT OFFICE.

JAMES W. TUFTS, OF MEDFORD, MASSACHUSETTS.

IMPROVEMENT IN SODA-WATER APPARATUS.

Specification forming part of Letters Patent No. **136,345**, dated February 25, 1873.

To all whom it may concern:

Be it known that I, JAMES W. TUFTS, of Medford, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Soda-Water Apparatus; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention relates to the arrangement of the conducting-pipes leading into or connecting the soda-water cylinders contained in the ice-box or chamber that holds the sirup-containing chambers or cans, and the ice that refrigerates such chambers and the soda-water cylinders.

In my apparatus the sirup-cans are vertical compartments at the rear of the box, having horizontal tubes leading from the cans at or near the bottom of them for drawing the sirups, and in the ice-compartment in front of the cans I place two horizontal soda-water cylinders upon or immediately over the sirup-conducting pipes, said cylinders being preferably in the same plane, and one of them being placed in the front part of the ice-chamber, and the other in the rear part thereof. One of these cylinders connects with the soda-fountain, and the other with the draft-cock, and the first cylinder with the other, the connections being such that the aerated water enters one end of one cylinder, and passes through said cylinder and out of its opposite end into a pipe connecting the two cylinders, and through said connecting-pipe to one end of the other cylinder, through whose opposite end it passes through the outlet-pipe to the draft-cock.

In my invention I utilize the vertical space in the chamber between the two cylinders by making the cylinder-connecting pipe in the form of a series of vertical bends that greatly elongate the connecting-pipe and expose the soda-water passing through them to the direct cooling action of the ice placed upon both sides of them and extending between the bends. My invention consists in this arrangement of the pipe connecting the cylinders.

The drawing represents a case embodying my improved arrangement.

a denotes the box or case, its top being removed, and its front wall broken out. *b* denotes the sirup-containing vessels, arranged in the rear part of the ice-chamber *c*, each vessel *b* having an outlet or delivery-pipe *d* extending from the bottom of its chamber horizontally to the front of the case. Just in front of the sirup-vessels *b* and over the pipes *d* is a cylinder, *e*, into one end of which the charged water leads through an inlet-pipe, *f*, the water passing through this cylinder and out from its opposite end through a pipe, *g*, to a similar cylinder, *h*, placed just in rear of the front wall of the case, the water passing through this second cylinder from the end *i*, at which it enters to the opposite end from which it flows through the delivery-tube *k* to the draft-cock at the end of such tube.

Instead of leading the pipe *g* from the end of the cylinder directly to the adjacent end of the cylinder, I lengthen the pipe by means of the series of vertical bends *l*, which are arranged in line midway between the vessels *e* *h*, and extending nearly through the vertical space of the ice-chamber, these bends being preferably stayed by suitable connecting supports *m*, and being so arranged that the ice will pack closely against both sides of them, the fine ice also filling the space between them.

The long connection thus arranged greatly facilitates the cooling of the soda-water, while the pipes occupy but little if any space that could be made available for any other purpose.

The bends *l* are shown as extending up between the cylinders *e* *h*, located upon the pipes *d*, extending from the sirup-chambers; but the sirup-chambers and their delivery-pipes may, of course, be differently arranged.

I claim—

In combination with the sirup-cans, ice-chamber, and cylinders, all arranged substantially as described, the connecting-pipe, made in the form of a series of vertical bends, *l*, located between the cylinders, substantially as shown and described.

JAMES W. TUFTS.

Witnesses:

FRANCIS GOULD,
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