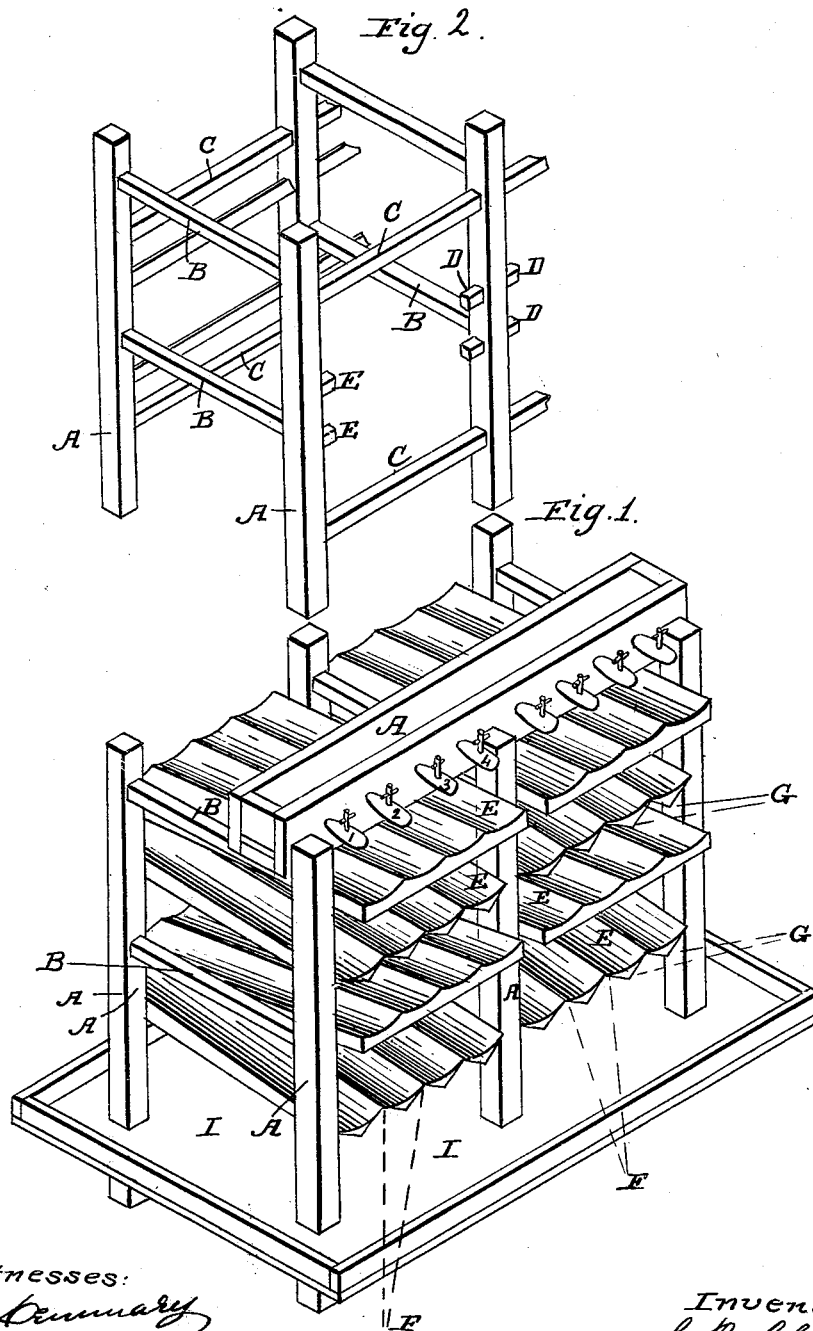


L. R. GLEASON.

Evaporator.

No. 53,438.

Patented March 27, 1866.



Witnesses:
John Lemmery
B. B. Beckman

Inventor:
L. R. Gleason

UNITED STATES PATENT OFFICE.

L. R. GLEASON, OF DUNDEE, NEW YORK.

IMPROVED EVAPORATOR.

Specification forming part of Letters Patent No. 53,438, dated March 27, 1866.

To all whom it may concern:

Be it known that I, L. R. GLEASON, of Dundee, in the county of Yates and State of New York, have invented a new and useful Improvement in Atmospheric Evaporators for the Manufacture of Salt from Natural Brine; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view, and Fig. 2 a section, of the frame-work of the same, and in which like letters refer to like parts.

I generally construct my evaporators of wood.

A A are posts; B B, girders. C C are also girders. D D are removable pins. E E are tables. F F are notches, and G G are points at the lowest end of the tables. H is a trough. 1 2 3 4 are taps and faucets. I is a vat.

The posts and girders are the frame-work or scaffolding.

The girders C C are supports to tables. The removable pins are also supports of some of the lower tables at one end. These pins may be taken out to let one end of a table down upon the one below it to facilitate the removal of the salt that crystallizes on the table.

The upper surface of the tables is formed into shallow channels and ridges running from one end to the other. One end of each table is lower than the other. The first has an inclination downward in one direction. The second has an inclination downward in the direction opposite to that of the first. The inclination of the third is like that of the first; the fourth like the second. The tables sustained between one set of posts are called a "stand." Several stands united together are called a "range." Any desired number of tables may be used in a stand, each inclining downward in the direction opposite to the one above it. The highest end of each table projects farther than the lowest end of the table next above it. The lowest end of each table is notched in its lowest edge to form points under the channels of the same table and over the channels in the table below it.

Brine is supplied to the trough and fed

through the faucets into the channels of the first table. It flows to the lowest end of the table and falls from the points into the channels of the second table at the highest end. It passes from the second table to the third, and so on from one table to another to the last. The brine is conveyed all over the tables in channels at small distances apart, and its attraction to the wood causes it to spread toward the ridges. When the brine is properly fed through the faucets all or nearly all of the upper surface of the tables is kept wet. If the water of the brine is not all evaporated before it leaves the last table, the vat receives it.

The more brisk the wind, and at the same time the more dry and warm the atmosphere, the faster the flow of brine is required from the trough. While there is little or no wind and the air contains much vapor and is less warm, evaporation being slower, feed from the trough should be proportionately slower.

The object in using tables of such form in such a manner is to furnish the largest amount of evaporating-surface possible with the least proportionate expense of building and tending, and thereby producing a quick and cheap method of making salt from brine by atmospheric evaporation.

I do not claim the use of posts and girders, or of a trough or vat, or tables placed one above another in evaporators as my invention, as such things, including tables with raised edges and holes at their lowest ends, are described in Barruel's Practical Chemistry.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The channeling of tables, which allows of using broad tables.
2. The use of faucets to feed the brine upon the first table and to regulate the feeding according to the condition of the atmosphere.
3. The depending points, in combination with projecting ends of tables for directing the drip from one table to another correctly.
4. The removable pins, or their equivalent, for the purpose specified.

L. R. GLEASON.

Witnesses:

JOHN DEMMURY,
B. B. BEEKMON.