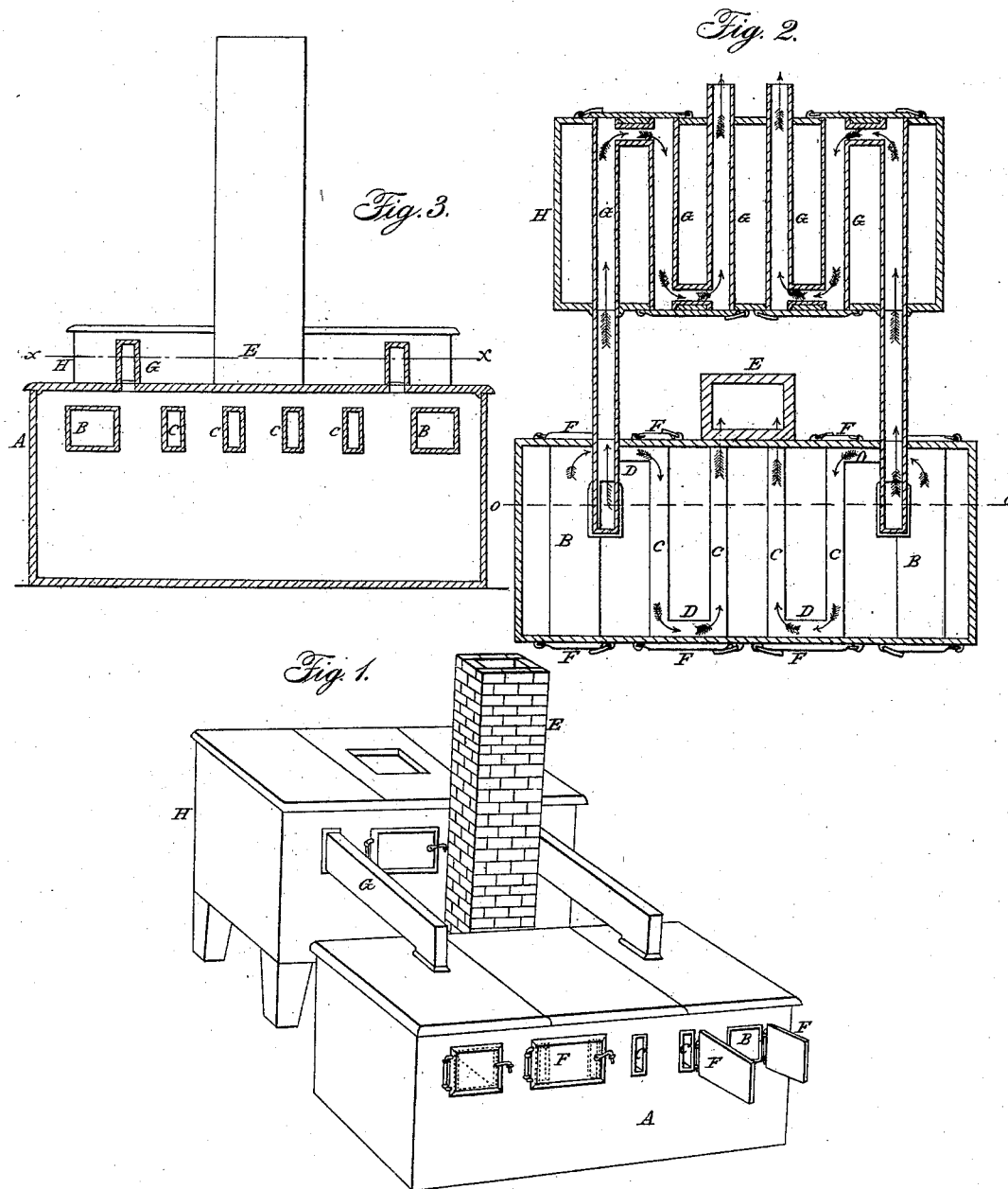


B. DOUGLAS.
Evaporating Pan.

No. 3,272.

Patented Sept. 23, 1843.



UNITED STATES PATENT OFFICE.

BERIAH DOUGLAS, OF ALBANY, NEW YORK.

IMPROVEMENT IN CRYSTALLIZING SALT.

Specification forming part of Letters Patent No. 3,272, dated September 23, 1843.

To all whom it may concern:

Be it known that I, BERIAH DOUGLAS, of the city and county of Albany, and State of New York, have invented a new and useful Mode of Boiling and Crystallizing Salt and Generating Steam, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view. Fig. 2 is a horizontal section at the line *x x* of Fig. 3. Fig. 3 is a vertical section at the line *o o* of Fig. 2.

Similar letters refer to corresponding parts.

The nature of my invention consists in the formation and arrangement of furnaces and flues in a boiler, by which salt is more perfectly and profitably made, and steam is generated for propelling and other purposes at less expense than by any other means.

To enable others skilled in the art to make and use my invention, I will describe its construction.

My salt-boiler A is made of plank. One of a medium size is twenty feet long, ten feet wide, and eight feet deep. Near each end of this boiler is an iron or copper furnace, B, which extends across and through the sides, so that it can be supplied with fuel at both ends. They are two feet deep and twenty inches wide. Parallel with these furnaces are arranged several straight flues, C, connected by cross-flues D, and extended through the sides of the boiler in the same manner as the furnaces, for the purpose of being easily cleaned or repaired. These flues are four

inches by twenty, and stand vertical, two feet apart, and terminate in one chimney, E, at the center. Their ends are closed by swing-doors F. The furnaces B and flues C are on a level in the upper part of the boiler A, much room being below for the salt to settle and crystallize in, the briny water being there still and cool, though boiling fast on top. The boiler is covered over with plank, and the steam generated therein is conveyed through another plank cistern, H, by a range of flues, G, constructed and arranged similar to those in the boiler.

The steam-cistern H is two feet higher than the boiler, and five or six feet from it. Its use is to evaporate and clarify the brine to fit it for the crystallizing process of the boiler, in to which it is subsequently drawn.

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

1. The before-described manner of precipitating and crystallizing salt in the briny water below the heating-furnaces and flues, by which means the salt is better made and more profitably than by any mode of boiling in kettles or troughs over the fire, as is usually done.

2. The described mode of arranging furnaces and flues, open on both sides of the boiler, for the purposes mentioned, the flues being wide and thin, standing vertical, and thus combined with the furnaces and plank boiler.

BERIAH DOUGLAS.

Witnesses:

EDM. MAHER,
WM. P. ELLIOT.