(No Model.)

J. M. LAING.

Brine Agitator.

No. 235,155. Patented Dec. 7, 1880.

Fig. 1

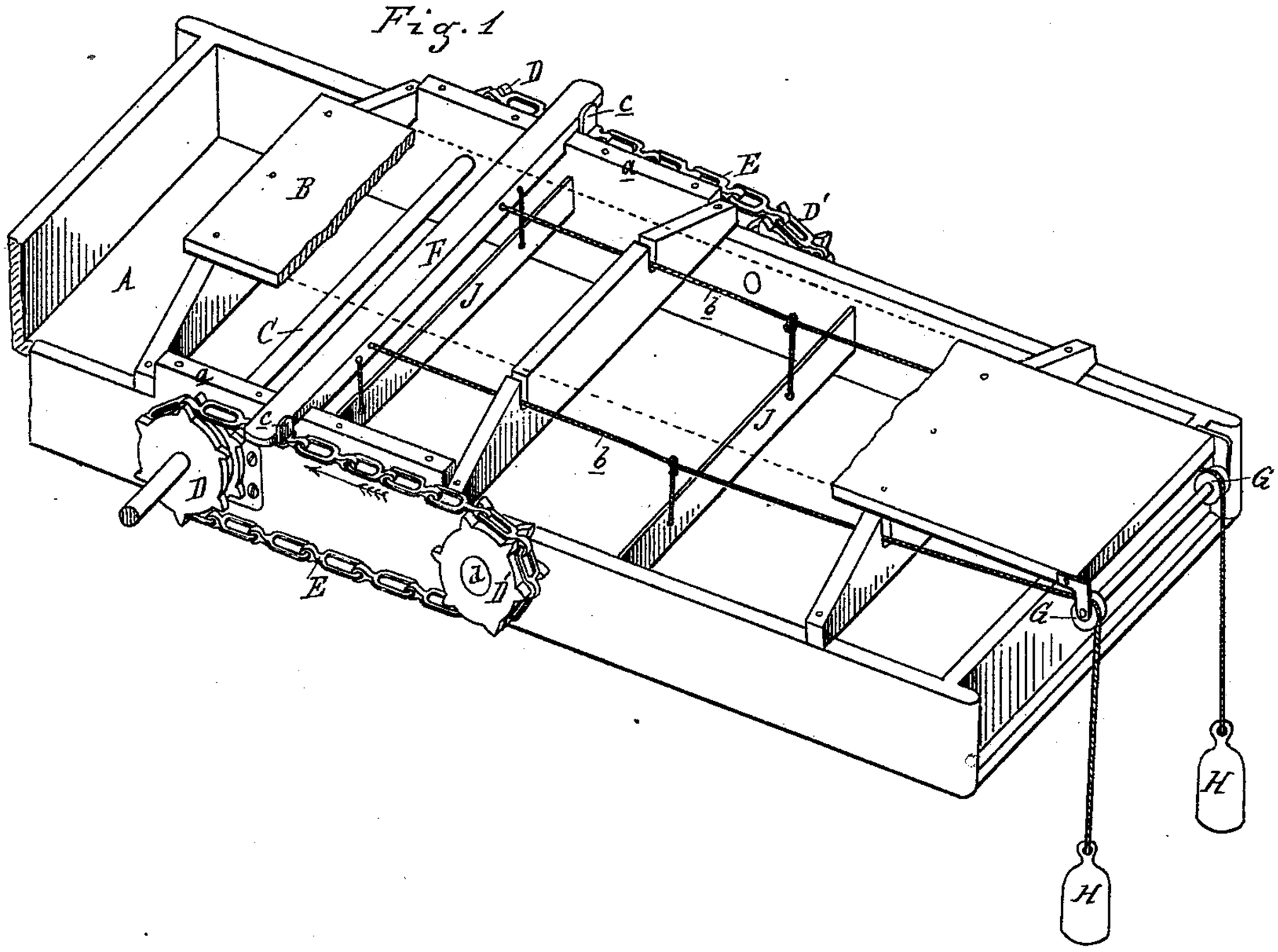
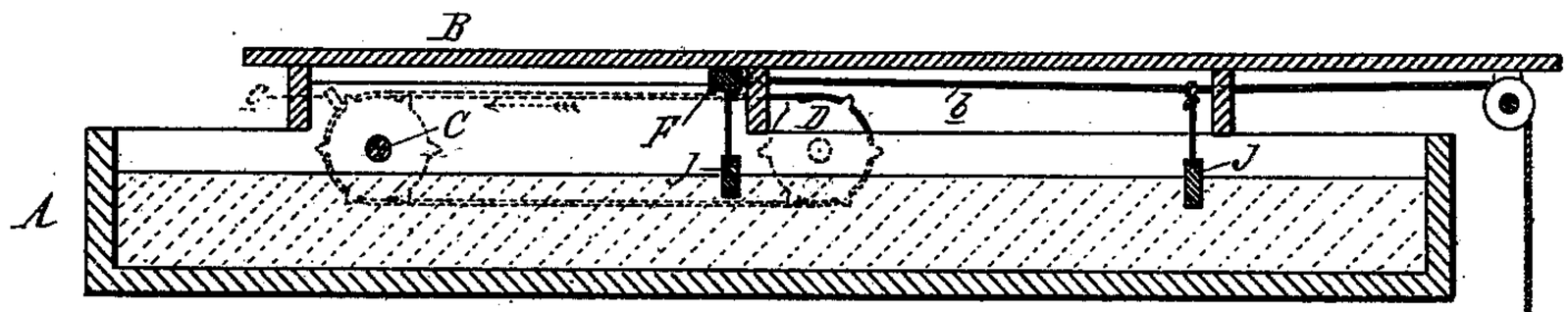


Fig. 2



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JAMES M. LAING, OF BAY CITY, MICHIGAN.

BRINE-AGITATOR.

SPECIFICATION forming part of Letters Patent No. 235,155, dated December 7, 1880.

Application filed March 27, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. LAING, of Bay City, in the county of Bay and State of Michigan, have invented an Improvement in Brine-Agitators, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in that class of apparatus used in the manufacture of salt in which the brine is agitated at stated intervals by means of floats or bars, and the salt-crystals in the brine precipitated.

Heretofore salt-crystals of a uniform size and of any particular and uniform size have been formed by precipitating said crystals in the brine by the agitation of the latter at regular intervals of time by means of floats or bars suspended therein.

The invention consists in the peculiar construction and arrangement of parts, all as more fully hereinafter set forth.

In the drawings, Figure 1 is a perspective view. Fig. 2 is a vertical longitudinal section.

In the accompanying drawings, which form a part of this specification, A represents a salt-grainer provided with the platform B, all of the usual construction. Near one end of this grainer I journal, transversely across the same, the shaft C, which carries upon each end a sprocket-wheel, D. Sprocket-wheels D′ are also journaled on short shafts *d*, on each side of the grainer, and secured to its longitudinal sides, opposite each other.

E E represent endless chains provided with studs *c*, which chains pass around the sprocket upon wheels D D.

A bar, F, is placed across the top of the grainer, the ends resting upon slides *d*. To this bar F, I secure two or more rods or chains, *b*, which lead back under the platform B, and pass over pulleys G at the rear end of the grainer, and have secured to their free ends weights H. In each section of the grainer I suspend from the rod *b* a float or paddle, J.

In practice, the shaft being rotated, the chains are likewise carried forward until the studs *c* on each chain come in contact with the ends of the bar F. This movement being continued, the bar F, with the floats, is carried slowly toward the front end of the grainer until the studs *c* slide under the ends of the bar F. The weights H then quickly jerk the bar back to its original position, causing the floats or paddles to agitate the brine and precipitate the salt formed on the surface of the brine to the bottom of the grainer. This agitation of the brine, as described, is repeated more or less frequently, as the quality of salt required may demand.

By the use of this device the use of butter, wholly or in part, is done away with, while at the same time it prevents the surface of the brine from coating over and stopping the evaporation.

What I claim as my invention is—

In a salt-grainer, and in combination with the shaft C, the sprocket-wheels D D′, chains E, bar F, rods or chains *b*, floats or paddles J, and weights H, substantially as and for the purposes specified.

JAMES M. LAING.

Witnesses:

H. S. SPRAGUE,

CHARLES J. HUNT.