

GEORGE C. BRIGGS.

Improvement in Apparatus for Drying Salt.

No. 115,564.

Fig. 1.

Patented June 6, 1871.

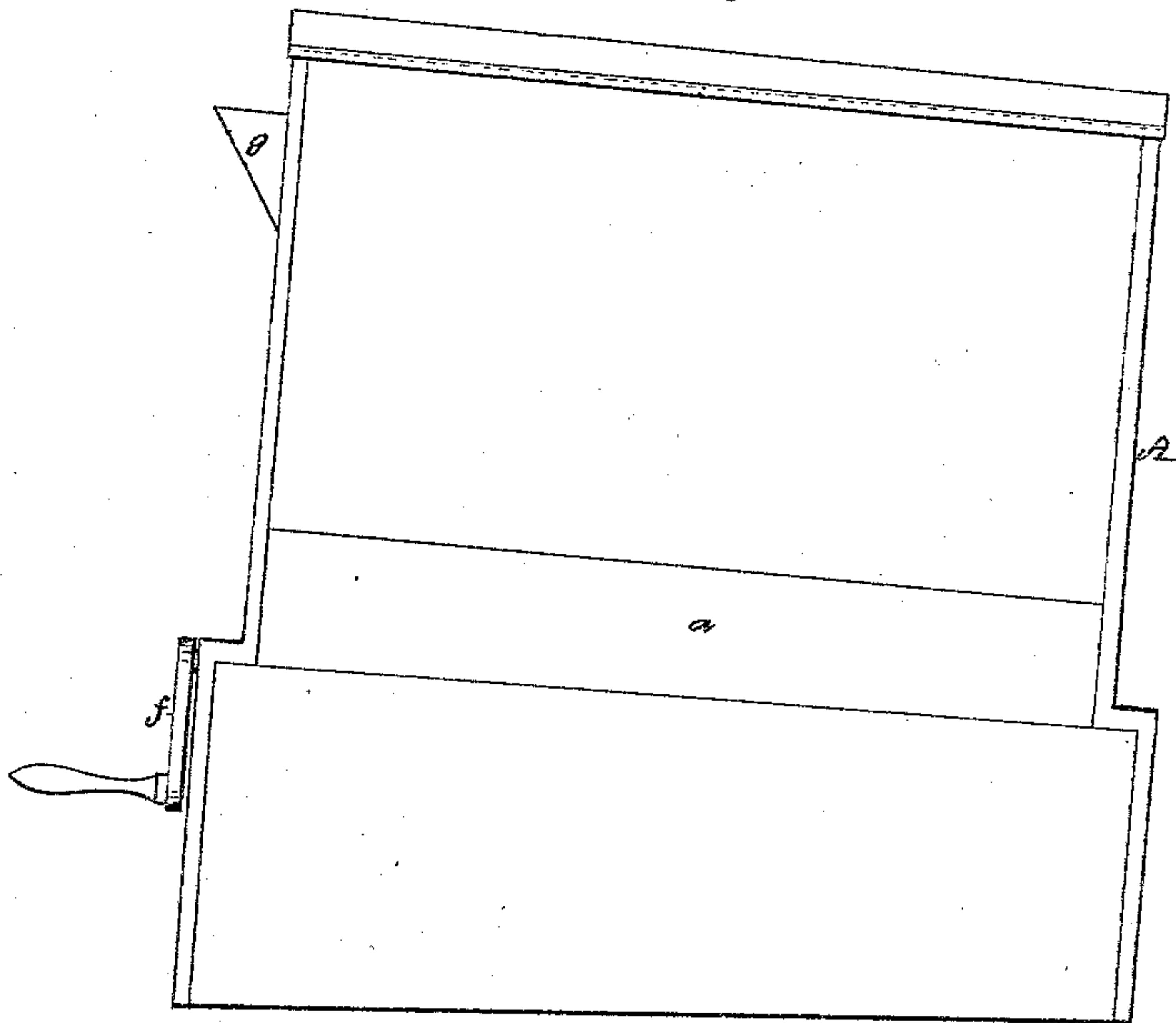


Fig. 2.

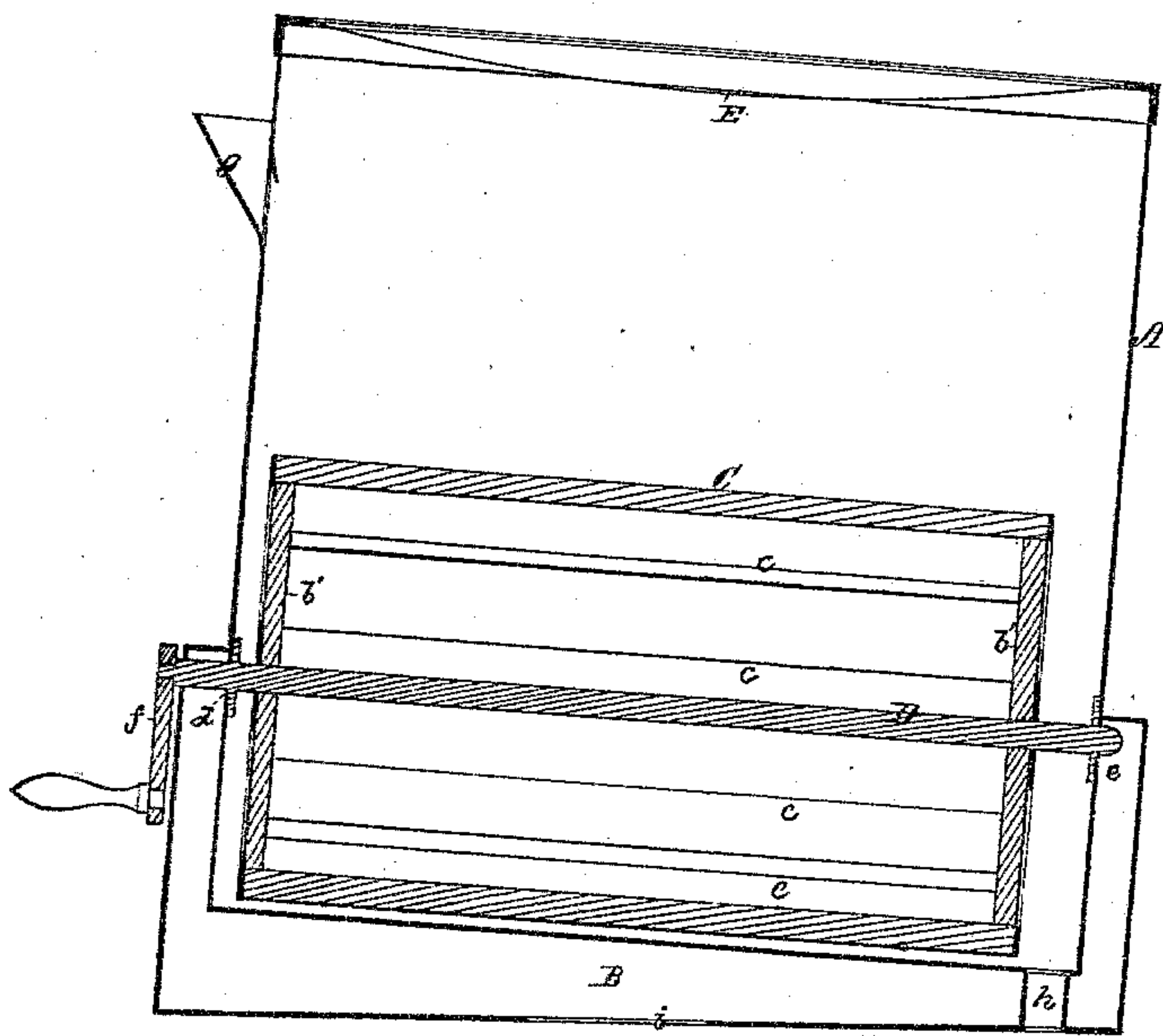
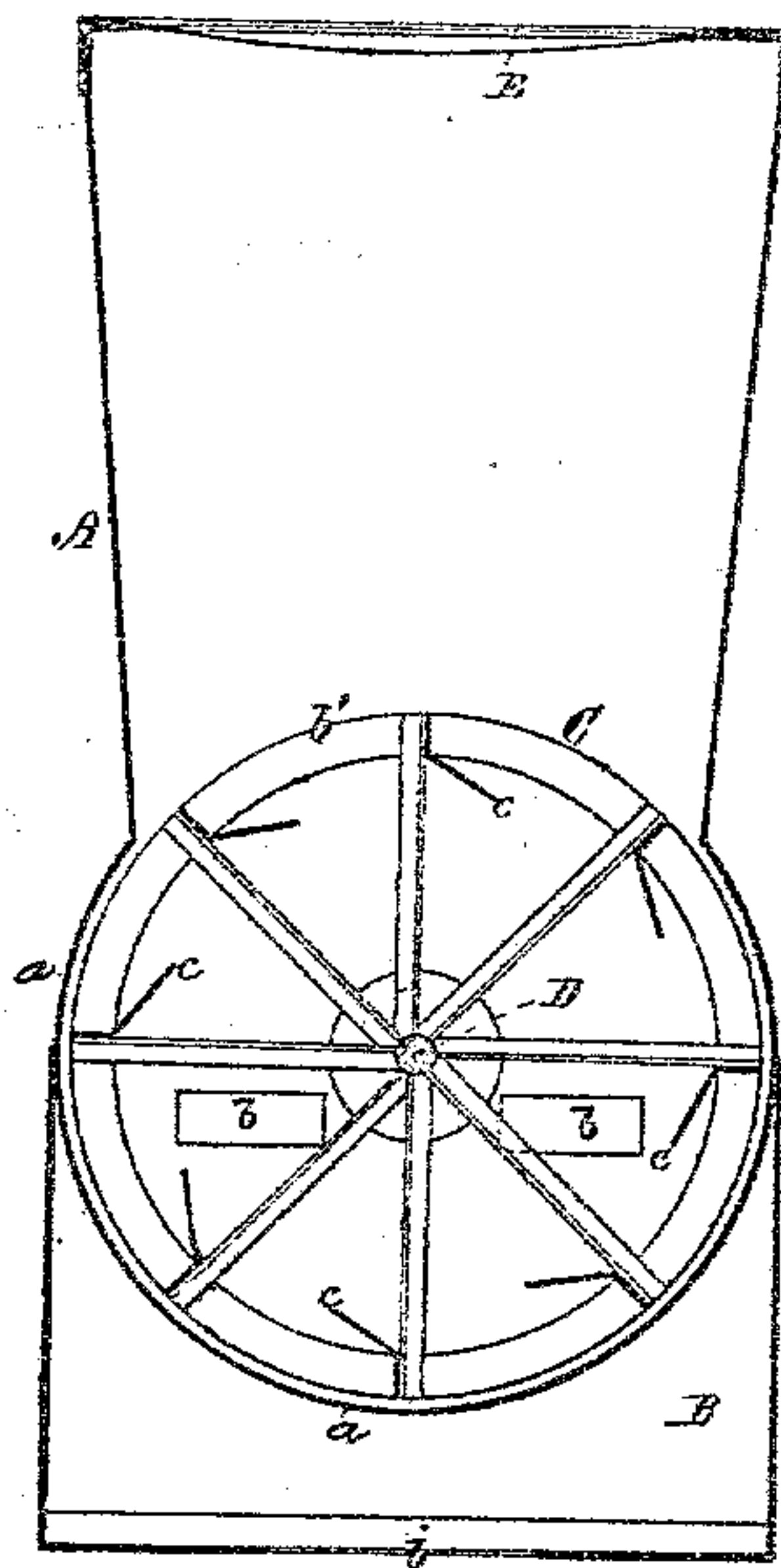


Fig. 3.



Witnesses.

S. N. Piper

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UNITED STATES PATENT OFFICE.

GEORGE C. BRIGGS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR DRYING SALT.

Specification forming part of Letters Patent No. 115,564, dated June 6, 1871.

To all to whom these presents may come:

Be it known that I, GEORGE C. BRIGGS, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful or Improved Salt-Drying Apparatus; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a side elevation, Fig. 2 a longitudinal and vertical section, and Fig. 3 a transverse and vertical section of it.

In such drawing, A denotes a drying-case or chamber, the lower part *a* of which is curved, and arranged within a hot-air receiving space or chamber, B, and communicates therewith through openings *b* or inducts made through the ends of chamber A, in manner as shown. The curved bottom or part *a* of the said chamber A is inclined as represented, and has arranged within it a rotary agitator and elevator, C, composed of two heads or wheels, *b' b'*, and a series of angular blades or lifters, *c c c*, all being formed and arranged as shown in Figs. 2 and 3. This agitator and elevator C is mounted on a shaft, D, supported in bearings *d e*, and extended through one end of the hot-air chamber, so as to receive a crank, *f*, or other means of revolving such shaft, in order to put the agitator C in revolution, as occasion may require. At one end of the chamber A is a receiving induct or hopper, *g*, and there is, at the lower part of the said chamber, and at its opposite end, an educt or discharging-conduit, *h*, all being arranged as shown. Furthermore, at the top of the chamber A is a covering, E, of cloth, or what may be termed the vapor-strainer and fine-salt retainer. If desirable there may be one or more openings through each of the sides or ends of the chamber A, and each of such openings may be covered with cloth. Through or in the lower part or bottom of the hot-air space B there is to be an induct, *i*, for admission of heated air into the chamber B, such air being supplied by an air-heating furnace or other proper means of warming air.

In the operation of this apparatus the salt to be treated or dried is to be introduced into

the chamber A by its induct, hot air being at the time suffered or caused to flow into the air-chamber B, from which it will pass into the chamber A after radiating heat into the bottom thereof. The agitator and elevator, in the meantime, is to be put in revolution, so as to successively raise the salt off the bottom *a* and drop it back therefrom, in order to separate the grains and expose their surfaces to the drying action of the hot air. The vapor that may be produced will pass upward through and escape by the cloth cover of the chamber A, such cover serving, at the same time, to retain in the chamber the fine dust or salt usually created in great quantity, or prevent its escape with the vapor. As the salt may become dried it will work its way down the inclined bottom of the chamber, and finally escape by the educt or discharging-conduit.

This apparatus operates to great advantage as a salt-drier, one of its chief merits being its power to intercept or retain the fine salt-dust or prevent its escape except through the main educt of the drying-chamber, the vapor, when formed, being caused to escape through the meshes of the cloth covering E.

I claim as my invention—

1. The salt-drying apparatus, composed of instrumentalities as described, arranged to operate substantially as specified, such instrumentalities consisting of the drying-chamber A, the hot-air induct *b*, the vapor-strainer and fine-salt retainer E, and the rotary agitator and elevator C, as explained, the chamber being provided with an inlet for reception of the salt, and an outlet for its discharge, arranged essentially as represented.

2. The combination and arrangement of the hot-air receiving-space B and its discharging educt or educts *b* with the chamber A, the elevating-agitator C, and the fine-salt retainer and vapor strainer or discharger E, all being substantially as described.

GEO. C. BRIGGS.

Witnesses:

R. H. EDDY,
J. R. SNOW.