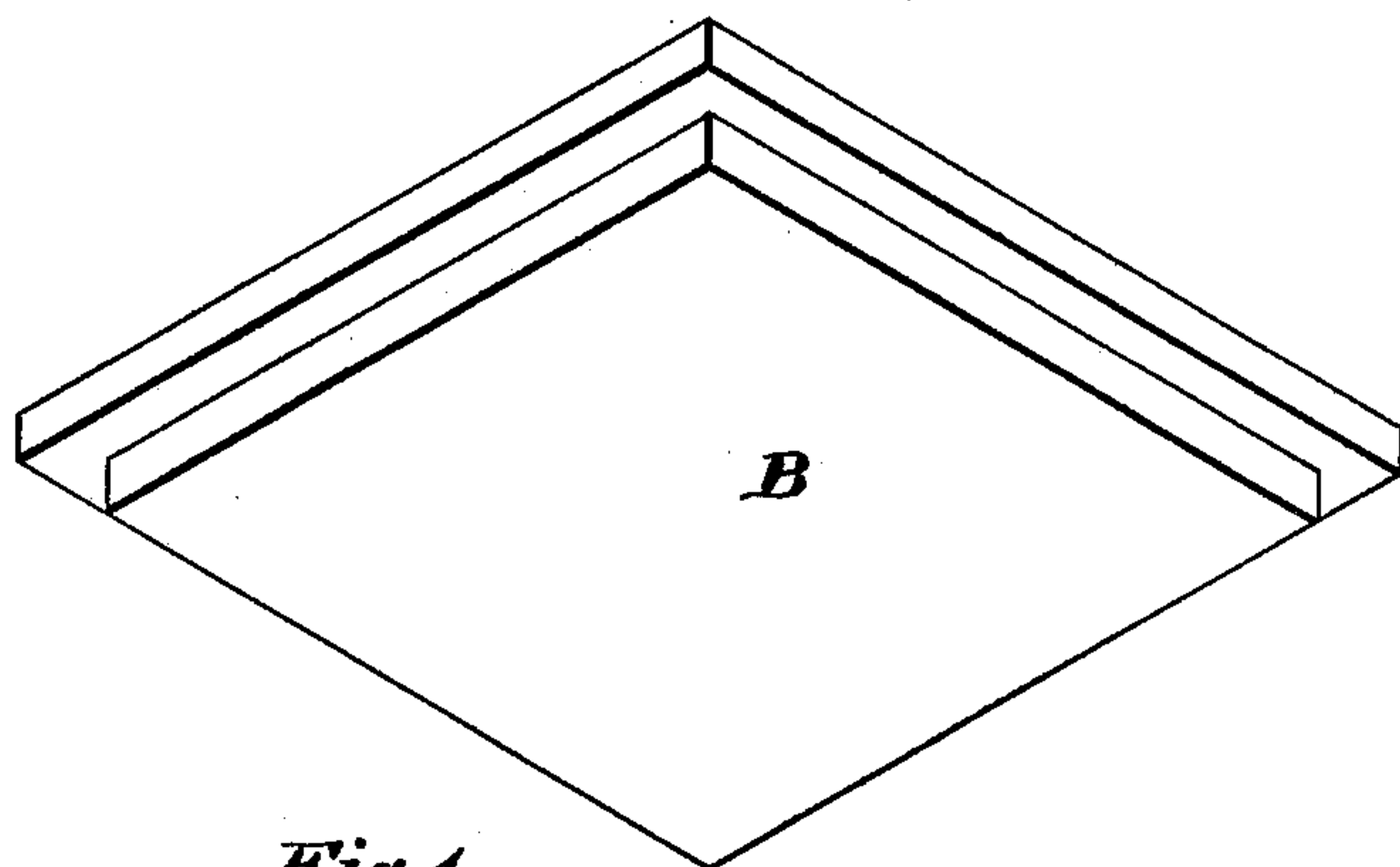


H. A. DUC, Jr.

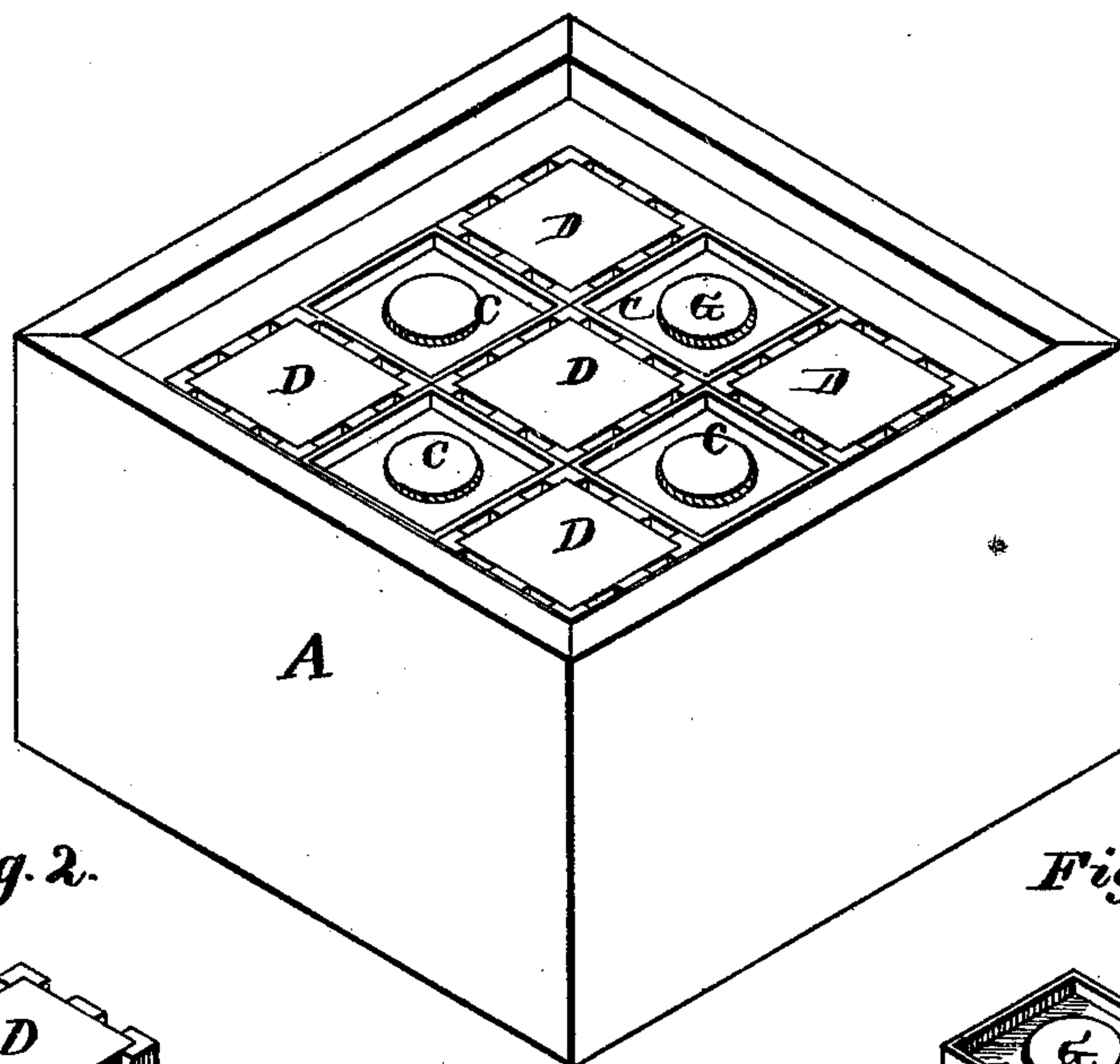
REFRIGERATING SHIPPING BOXES.

No. 188,609

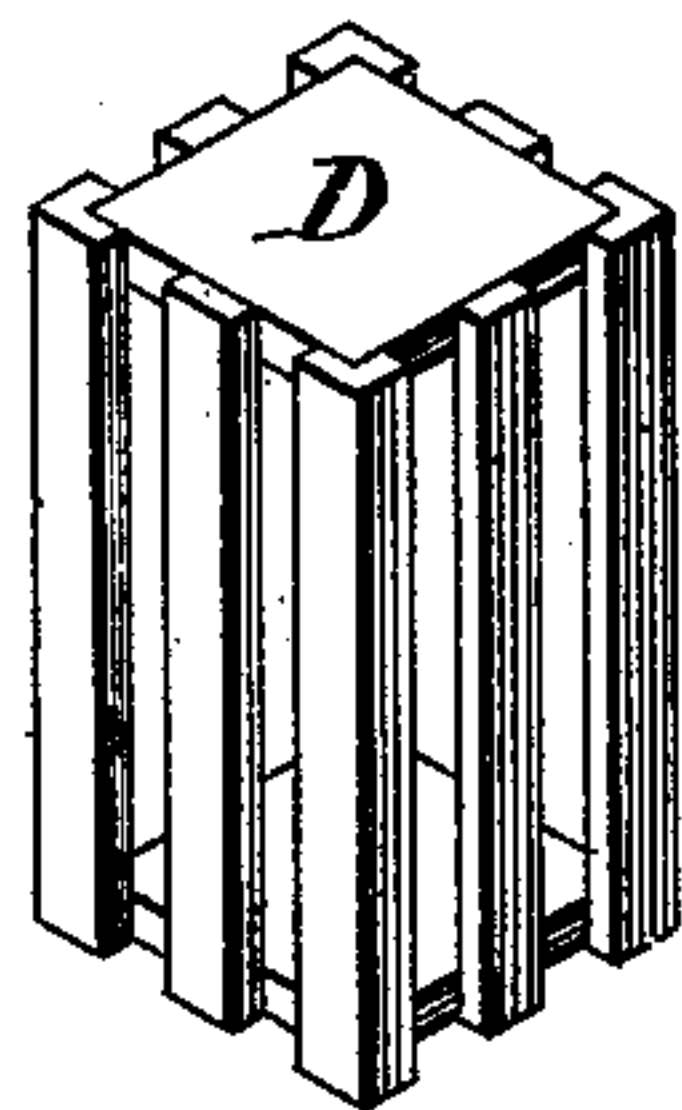
Patented March 20, 1877.



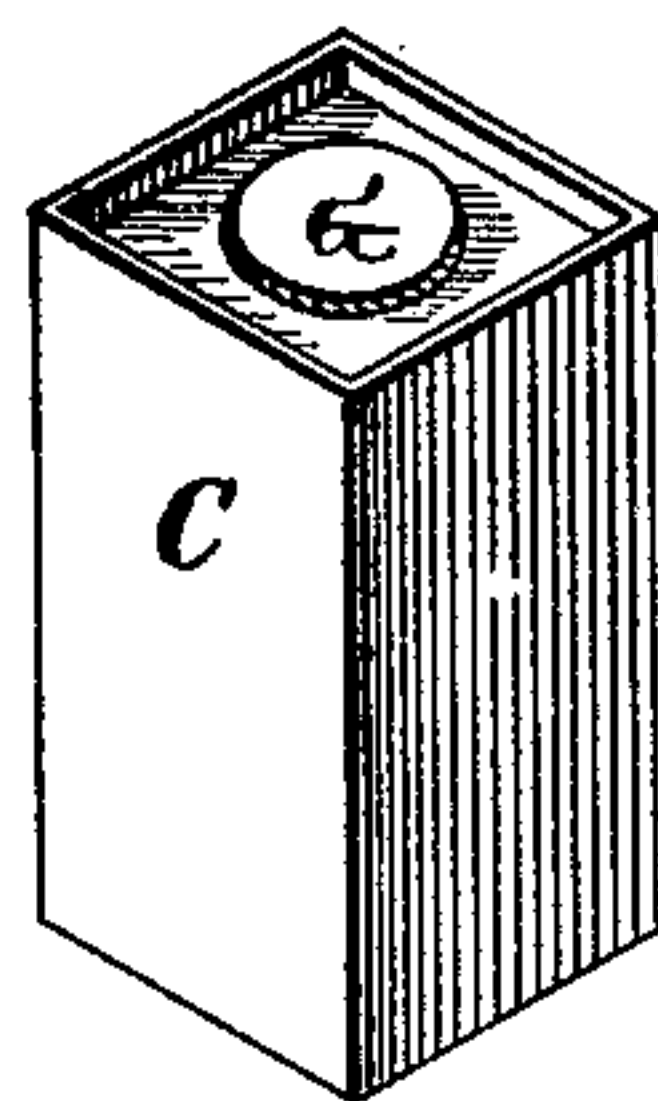
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES

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INVENTOR

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# UNITED STATES PATENT OFFICE.

HENRY A. DUC, JR., OF CHARLESTON, SOUTH CAROLINA.

## IMPROVEMENT IN REFRIGERATING SHIPPING-BOXES.

Specification forming part of Letters Patent No. **188,609**, dated March 20, 1877 ; application filed September 9, 1876.

*To all whom it may concern:*

Be it known that I, HENRY A. DUC, Jr., of Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Refrigerating Shipping-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to refrigerating shipping-boxes, for the transportation of fruit, vegetables, &c.; and it consists in providing a suitable case with one or more series of alternate closed removable ice-boxes and open removable fruit-boxes, all being of the same size, so as to be interchangeable, one for another, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my invention with the cover of the outside box or case removed. Figs. 2 and 3 are perspective views, respectively, of the fruit and ice boxes.

A represents the outer or shipping box or case, constructed, in any suitable manner, with double walls, having the space between them filled with some suitable non-conducting material. B is the cover of the case A, constructed in similar manner. C C represent closed boxes of any suitable material, provided with screw caps or covers G, to render the same perfectly tight. These boxes are intended to hold ice, or any suitable refrigerating mixture, and the caps or covers G prevent any leakage, so that the refrigerating material, whatever the same may be, cannot escape and

come in contact with the fruit, to spoil the same in any way. D D represent ordinary open or slat fruit-boxes, made of any suitable material. The ice-boxes C and fruit-boxes D are of precisely the same size and shape, and are arranged alternately in the box or case A.

In shipping fruit, &c., it depends upon the season of the year, as well as the distance the articles have to go, whether more or less refrigerating material is needed. If the ice-boxes were stationary in the outer case the same space would be occupied, whether much or little ice were needed, and only the same quantity of fruit could be shipped in each case.

By my invention of having removable ice and fruit boxes of the same size, and interchangeable, one for another, it is readily seen that more or less ice can be used, as required, and that no more room is taken up for ice than just what the ice occupies, and the whole remaining space may be filled with fruit-boxes; and the ice-boxes may be distributed among the fruit-boxes in any manner desired to accomplish the best result.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A refrigerating shipping-box, consisting of an exterior case, A, with cover B, and containing a number of closed ice-boxes, C, and open fruit-boxes D, which are removable and interchangeable, one with another, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HENRY A. DUC, JR.

Witnesses:

J. L. HONOUR,  
ALONZO J. WHITE.