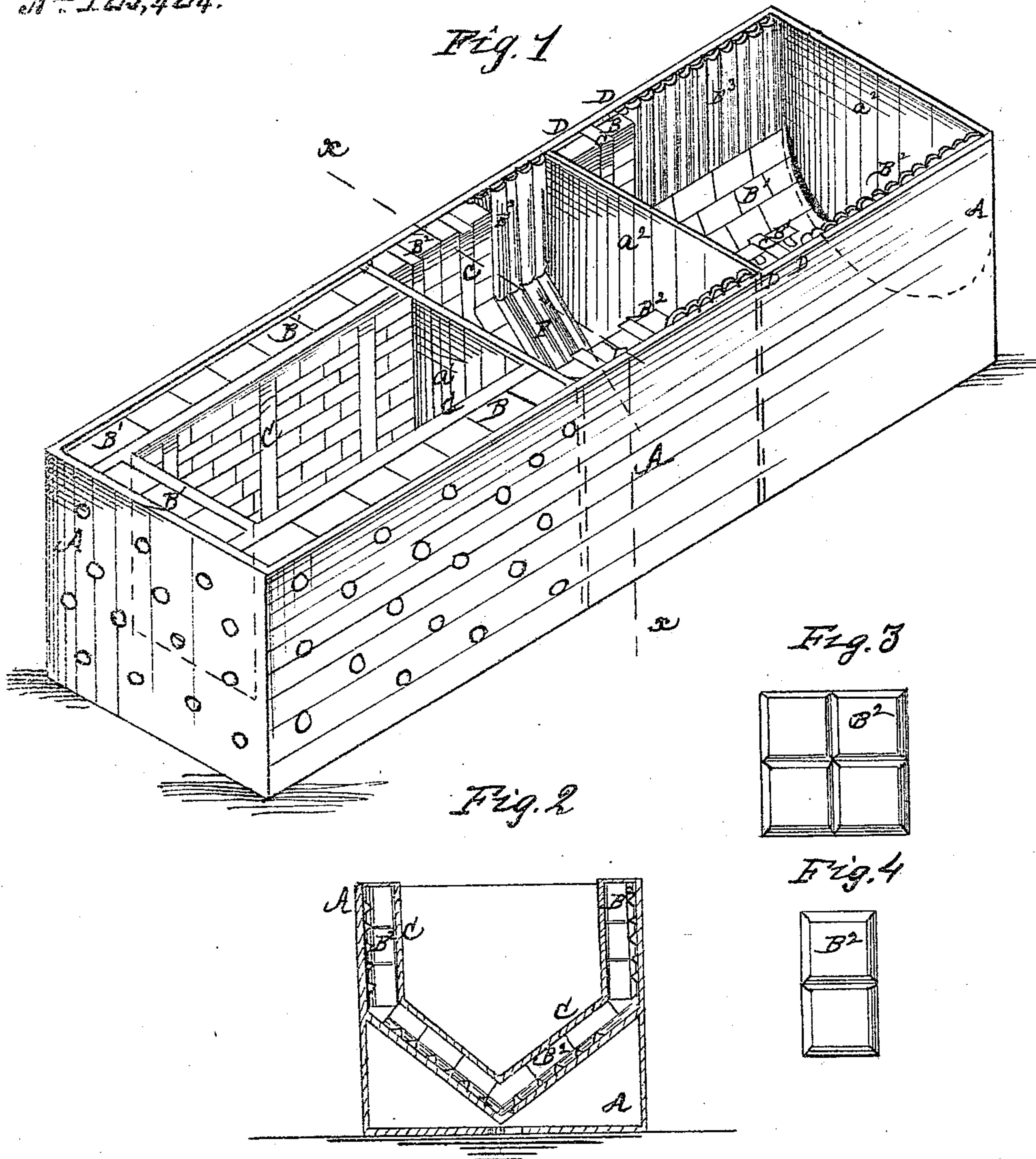


J. Royal

Bin for Storing and Drying Grain

No. 123,424.

Patented Feb. 6 1872.



Witnesses:  
Wm Dean Overell  
Chas. C. Cotton.

Inventor:  
J. Royal  
per Muny & Co



# UNITED STATES PATENT OFFICE.

JARVIS ROYAL, OF WHITE ROCK, ILLINOIS.

## IMPROVEMENT IN BINS FOR STORING AND DRYING GRAIN.

Specification forming part of Letters Patent No. 123,424, dated February 6, 1872.

*To all whom it may concern:*

Be it known that I, JARVIS ROYAL, of White Rock, in the county of Ogle and State of Illinois, have invented a new and useful Improvement in Bins for Storing and Drying Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 is a perspective view, illustrating several ways for carrying my invention into practical effect. Fig. 2 is a vertical cross-section taken through the line *x x*, Fig. 1. Fig. 3 is an under side view of one form of brick or tile. Fig. 4 is an under side view of another form of brick or tile.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of bins, boxes, ships, boats, &c., in which grain or other substances are placed for storage or transportation so that the substances placed in them—whether grain, fruits, flesh or fish, salt or sugar—may be dried and thus preserved from injury from dampness; and it consists in lining the inside of the bins, &c., with porous bricks or tiles.

A is a box divided into different compartments  $a^1$   $a^2$   $a^3$  to illustrate different ways of carrying my invention into practical effect. The compartment  $a^1$  represents a box or bin made roughly, so that the water may escape freely from its bottom and sides, being such a bin as any farmer might build for his own use. The compartment  $a^1$  is lined with plain bricks  $B^1$ , as shown, said bricks being placed end to end, side to side, or edge to edge, as may be desired. The bricks or tiles  $B^1$  may be secured

in place by a slight frame-work, C, or in any other convenient manner. The compartment  $a^2$  is made to represent an ordinary grain-bin, the bottom and sides of which are lined with bricks or tiles made in various styles, but always porous. The bricks or tiles  $B^2$  are chamfered upon their edges, so that when laid together the chamfers of the adjacent edges may form grooves or channels for the admission of air. When the bricks  $B^2$  are made large they may be grooved or channeled across their rear sides, as shown in Figs. 3 and 4. If desired, the bricks or tiles  $B^3$  may be made corrugated, as shown in compartments  $a^2$  and  $a^3$  of Fig. 1. In case plain brick or tile  $B^1$  are used to line the bin when made close thin laths D should be placed along the sides and bottom of the bin for the bricks or tiles to rest against, so as to form channels or openings for the ingress of the air. In some cases—as, for instance, in grain-boats and ships—it may be advisable to line the lower part of the bin with thicker and heavier brick or tile than is necessary for the sides or upper parts. By this construction the porous bricks or tiles will absorb the water from the grain or other substance, which, coming in contact with the air in the chamber or corrugations, is evaporated. This process of absorption and evaporation continues until all the grain in the bin is sufficiently dried.

I claim as new, and desire to secure by Letters Patent—

Interposing thin laths or rods between the outer sides of the bricks or tiles and the inner sides of the bin, substantially as herein shown and described, and for the purpose set forth.

JARVIS ROYAL.

Witnesses:

A. S. HOADLEY,  
HIRAM JONES.