

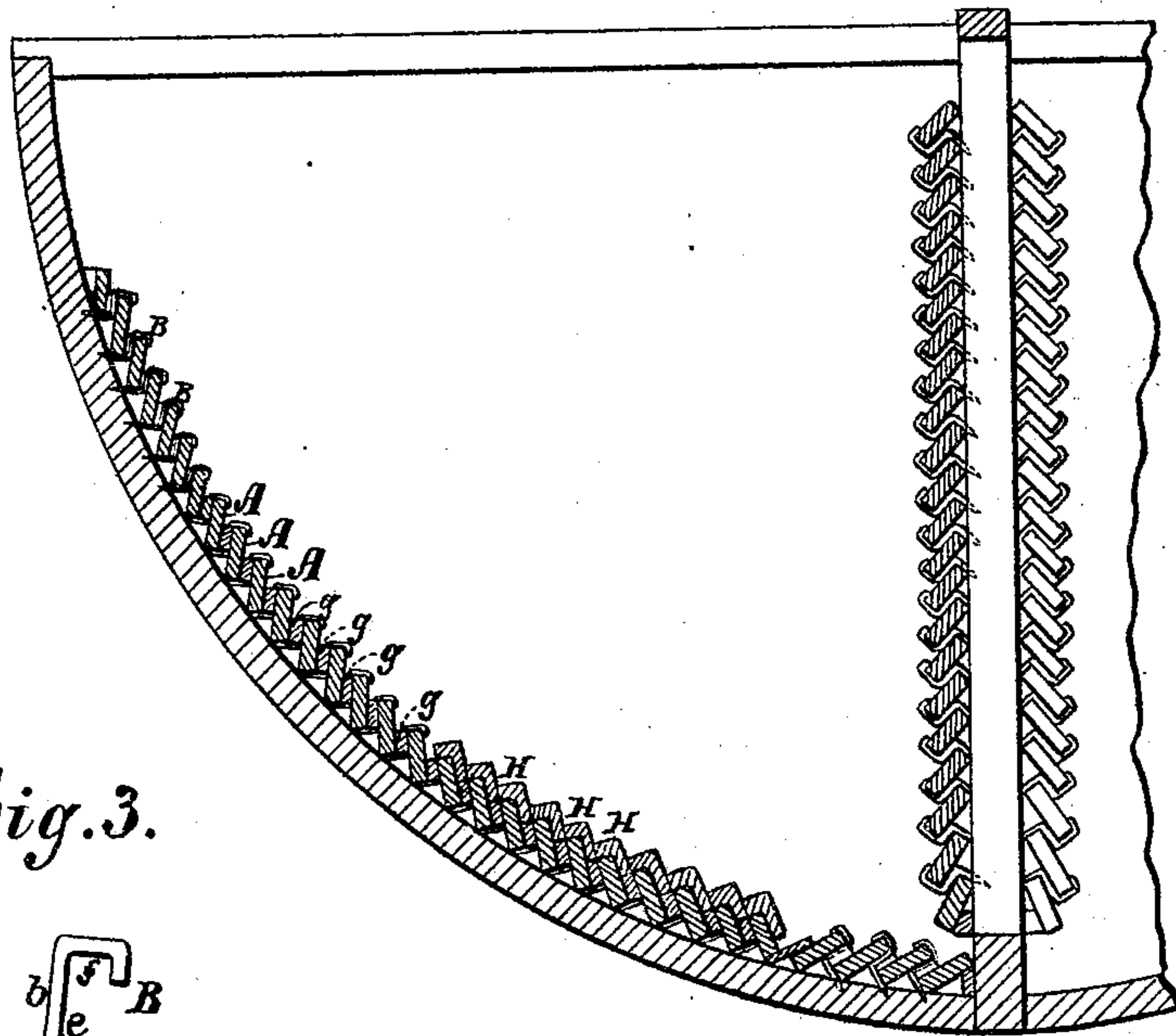
C. LAZAREVITCH.

Improvement in Grain-Ceilings for Vessels.

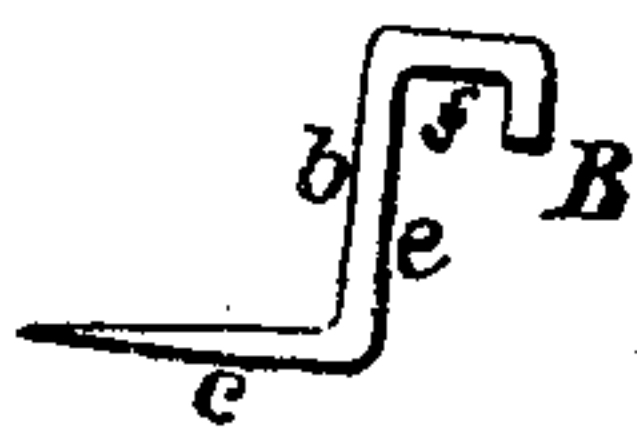
No. 130,434.

Patented Aug. 13, 1872.

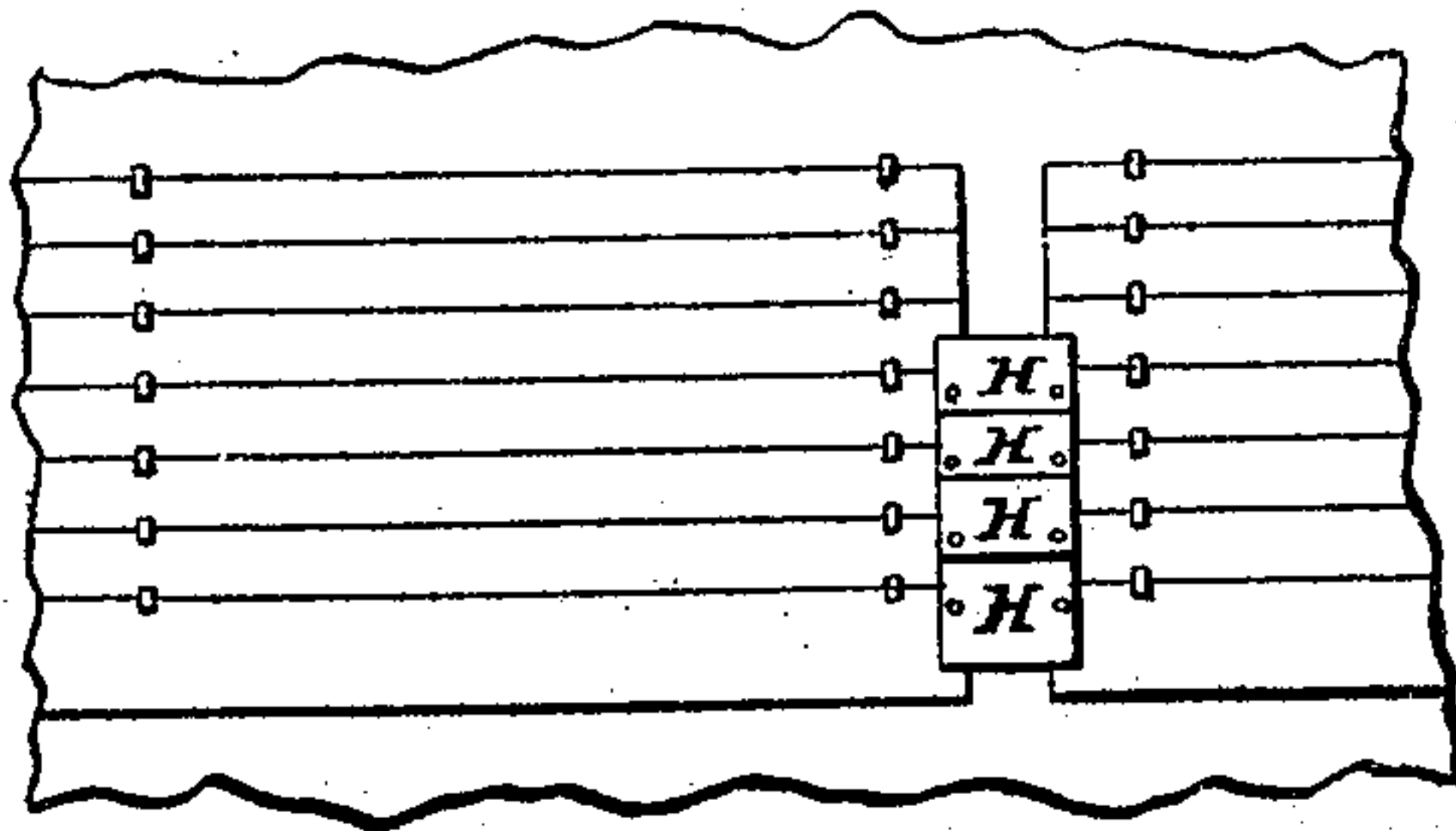
*Fig. 1*



*Fig. 3.*



*Fig. 2.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN GRAIN-CEILINGS FOR VESSELS.

Specification forming part of Letters Patent No. 130,434, dated August 13, 1872.

Specification describing a new and useful Improvement in Grain-Ceiling for Ships, invented by CONSTANTIN LAZAREVITCH, of the city, county, and State of New York.

When grain is shipped in bulk from one port to another, and especially to European ports, it is necessary to ceil the part of the vessel which contains such cargo to protect it from dampness. Such ceiling is required by the insurance companies. Boards are therefore placed between the bottom of the vessel and the grain, thus making a second bottom with boards, which overlap each other in that part of the hold. These boards are firmly nailed down to the bottom of the vessel, which renders it impossible to remove them without splitting, breaking, and effectually destroying them. This lumber, consisting of many thousand feet, is consequently sold for fire-wood after the grain has been discharged.

My object in this invention is to so put in and secure this ceiling that the lumber or boards of which it is composed shall not be injured, but may be removed intact and sold as perfect lumber, thus effecting a very material saving to ship-owners, while reducing the cost of freight. My invention therefore consists in securing the ceiling with hooks, which do not penetrate or injure the lumber, the construction and application of which is hereinafter more fully described.

In the accompanying drawing, Figure 1 represents a vertical cross-section of the hold of a vessel, showing the ceiling secured according to my invention. Fig. 2 is a top view of the ceiling, showing the mode of securing the joints. Fig. 3 is a view of one of my hooks detached.

Similar letters of reference indicate corresponding parts.

The drawing, Fig. 1, represents different views of the ceiling, showing the short cap at the joint as well as the other part of the ceil-

ing. A represents the boards, which are of the usual length and breadth employed for such purposes. I do not confine myself to any particulars as regards the lumber. B is the hook, made of metal, which I use in securing the ceiling to the parts of the vessel, either to the bottom or to upright partitions or bulkheads, as may be required. I do not confine myself to any particular arrangement of the ceiling, either on the bottom or on the partitions or bulkheads. The ceiling may be placed where it will best answer the purpose for which it is intended. The hooks B are driven into the bottom, or partition, or bulkhead, as seen in the drawing, so that each hook is brought in contact with and supports two boards. The shank *c* and back *b*, and the face *e*, and angle *f* are all brought in contact and serve to hold and secure the boards in place. Intermediate strips *g*, between the boards, of a thickness about equal to the diameter of the hook, may be inserted, if desired, as seen in the drawing. Where the ceiling joins, as seen in Fig. 2, the joint is covered by short caps, H, nailed or otherwise secured to the vessel.

I do not confine myself to a hook formed precisely like the one shown, but design to use any hook by which the ceiling may be securely fastened to the parts of the vessel without penetrating it with nails, and so that the boards can readily be removed uninjured.

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

The method of constructing and securing false or removable ceilings or floors, substantially in the manner and for the purposes described and set forth.

CONSTANTIN LAZAREVITCH.

Witnesses:

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