

(No Model.)

B. L. THOMSON.  
SHEATHING FOR SHIPS' BOTTOMS.

No. 272,352.

Patented Feb. 13, 1883.

FIG. 1

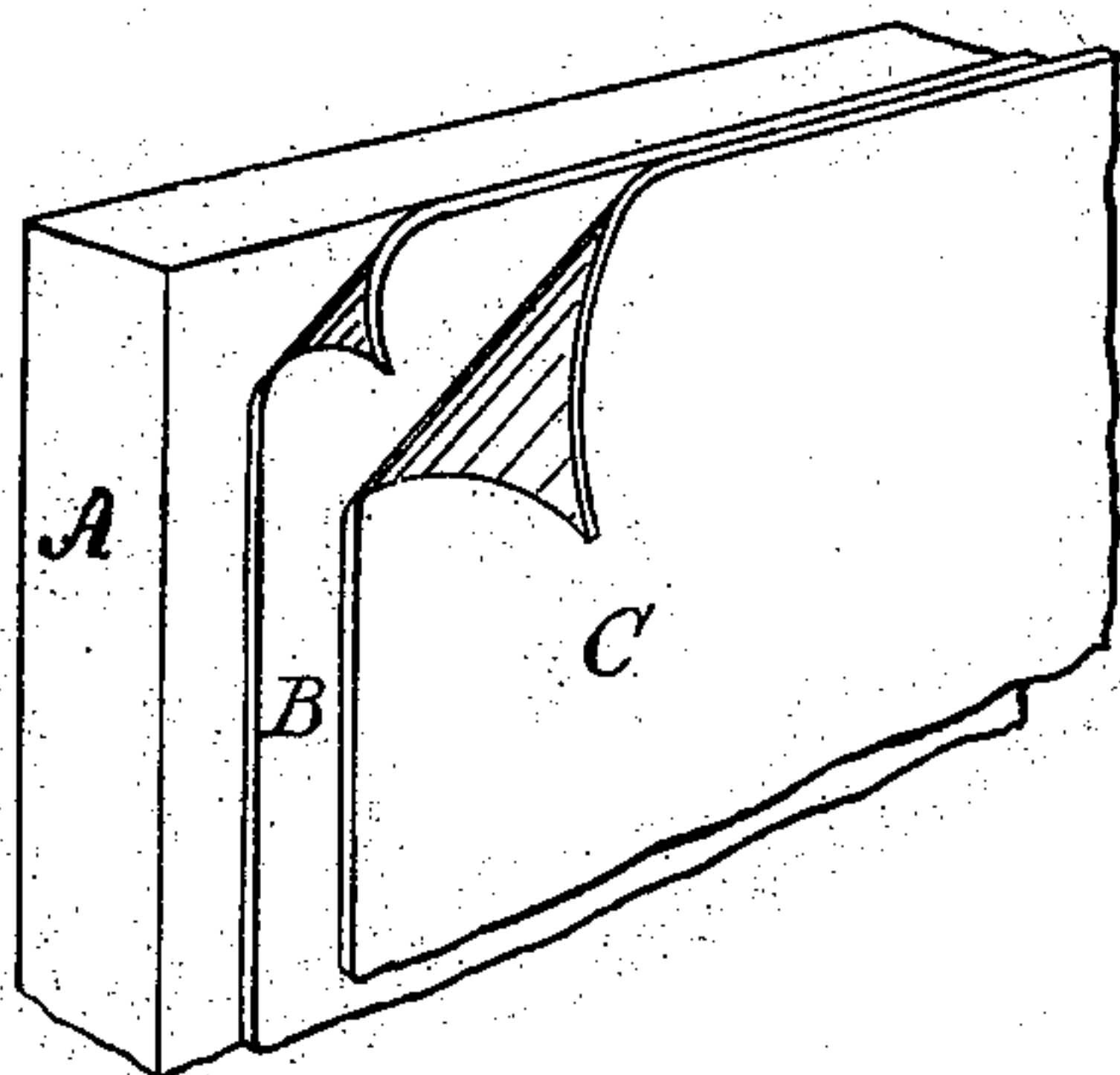
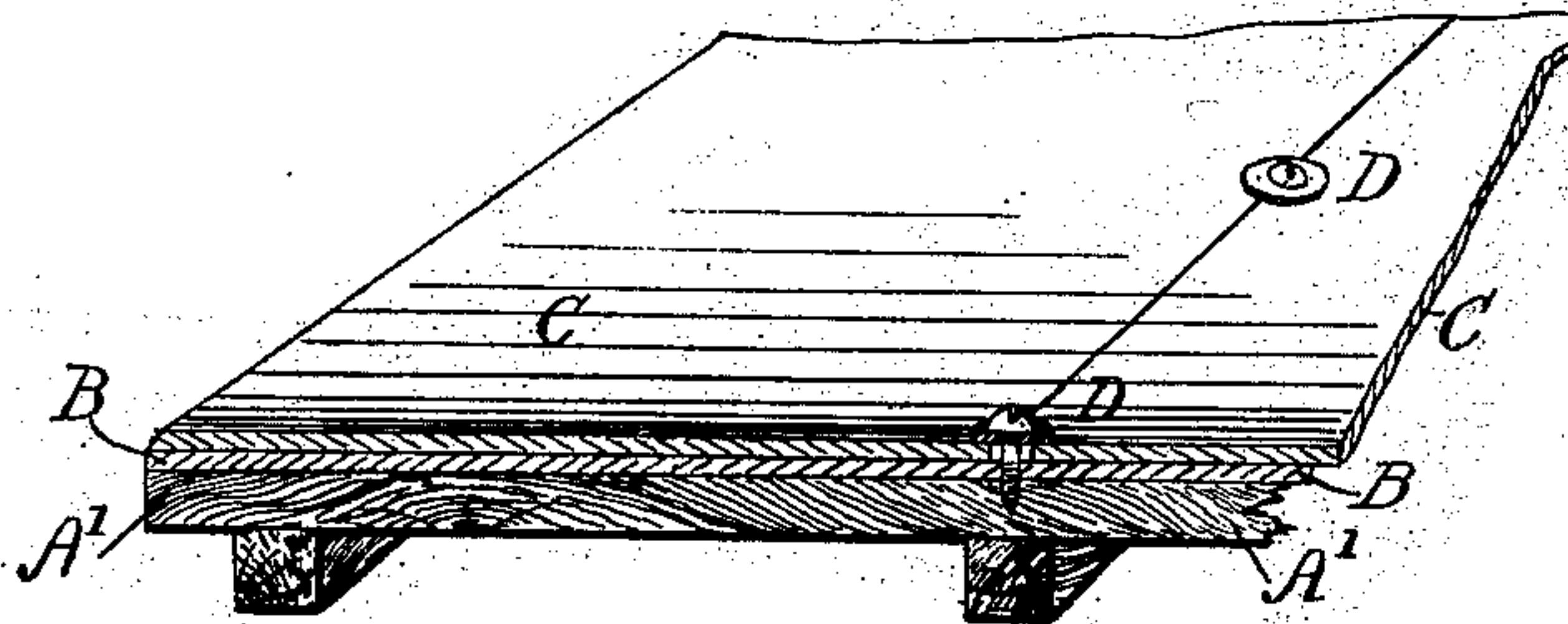


FIG. 2.



WITNESSES:

Harry Drury  
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INVENTOR:

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by his attorneys  
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# UNITED STATES PATENT OFFICE.

BENJAMIN L. THOMSON, OF LONDON, ENGLAND.

## SHEATHING FOR SHIPS' BOTTOMS.

SPECIFICATION forming part of Letters Patent No. 272,352, dated February 13, 1883.

Application filed December 7, 1882. (No model.) Patented in England August 17, 1881, No. 3,579, and January 27, 1882, No. 413.

*To all whom it may concern:*

Be it known that I, BENJAMIN LUMSDEN THOMSON, a subject of the Queen of Great Britain, and residing at Fenchurch Street, in the city of London, England, have invented certain improvements in the means for protecting ships or vessels or other submerged or partially-submerged surfaces, and roofs, walls, and other like surfaces, (for which I have obtained patents in Great Britain, No. 3,579, dated August 17, 1881, and No. 413, dated January 27, 1882,) of which the following is a specification.

My invention consists in certain improvements in protective plates, which are chiefly intended for application to wooden or iron ships and submerged surfaces, but more especially the outer surfaces of iron vessels, to prevent corrosion from fouling or deterioration. The protective plates are applicable, however, to walls and roofs, and also to the inner surfaces of ships or vessels as a security against the influence of bilge-water, drainage, leakage, or moisture from certain descriptions of cargo.

The main feature of my invention consists in covering the surface to be protected with vitreous plates of copper, zinc, yellow-metal, or other similar metal, and interposing between such plates and the surface to be protected certain materials, as hereinafter set forth, which, when applied to iron vessels, will have the effect of preventing galvanic action between the covering-plates and the iron vessel.

In the accompanying drawings, Figure 1 is a perspective view illustrating my invention, and Fig. 2 a sectional perspective view.

In carrying out my invention I coat or vitrify the inner sides of the protective plates C with silica or glass, and then apply thereto sheets B, of canvas or other textile fabric, paper, or thin asphalt. The material selected is cut into sheets of the requisite shape and size and immersed in or otherwise thoroughly impregnated with a solution of prepared india-rubber, gutta-percha, pitch, tar, asphalt, ozocerite, (or what is termed "Jews' pitch,") or any other glutinous substance or mixture or combination of such substances. To attach these plates to

the hulls of vessels or other surfaces, A, the same substances may be used as adhesive media; or the plates may be fixed to the side of the vessel or other body by nails, screws, rivets, or other fastenings; but I prefer to attach the plates to the surface to be protected through the medium of an adhesive solution similar to that used for impregnating the interposed material, as above described.

If desired, thin vitrified iron plates may also be interposed between the outer protecting-plates and the hull of the ship.

In applying my invention to the protection of walls, roofs, and the like, as shown at A', Fig. 2, the surface to be protected is covered with an enameled or vitrified plate or plates, C, of iron or tin or other metal. These plates are preferably enameled or coated with vitreous materials on both sides thereof; or they may be coated only on one side, in which latter case they are to be covered on the side to be attached to the roof or other surface with suitable cement, glue, or other adhesive substance. In addition to this cement or equivalent adhesive material, or in place thereof, I may employ nails, screws, or like fastenings, D, in which case the holes therefor are preferably made large enough to allow for contraction and expansion, and underneath the heads of the screws or other fastenings I prefer to place rubber or felt washers. Cloth, paper, or other material, B, saturated with prepared india-rubber, gutta-percha, tar, asphalt, or ozocerite, either separately or combined, is interposed between the outside metal plates and the roof or other surface to be protected.

The plates are preferably formed with a bevel or turn-down edge to prevent corrosion.

My improved protective plates may be applied to the covering of movable partitions, walls, compartments of ships, or divisions on the stages of theaters, or for similar purposes, as a protection from fire; and, if desired, the plates may be arranged on rollers traveling in suitable grooves, so as to be removable when required.

Where a number of protective plates are used the joints should be filled in with cement,



glue, or other adhesive and protective materials of a like character.

I claim as my invention—

5 The combination of a ship's hull or other surface with a protective plate of enameled or vitrified metal and an intermediate layer of fibrous material saturated with a glutinous substance, substantially as described.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses. 10

BEN. L. THOMSON.

Witnesses:

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