2 Sheets—Sheet 1.

E. W. GLOVER & E. C. MORRIS.

FIRE-PROOF EXPRESS-CHEST.

No. 186,828 Patented Jan. 30, 1877.

Fig. 1.

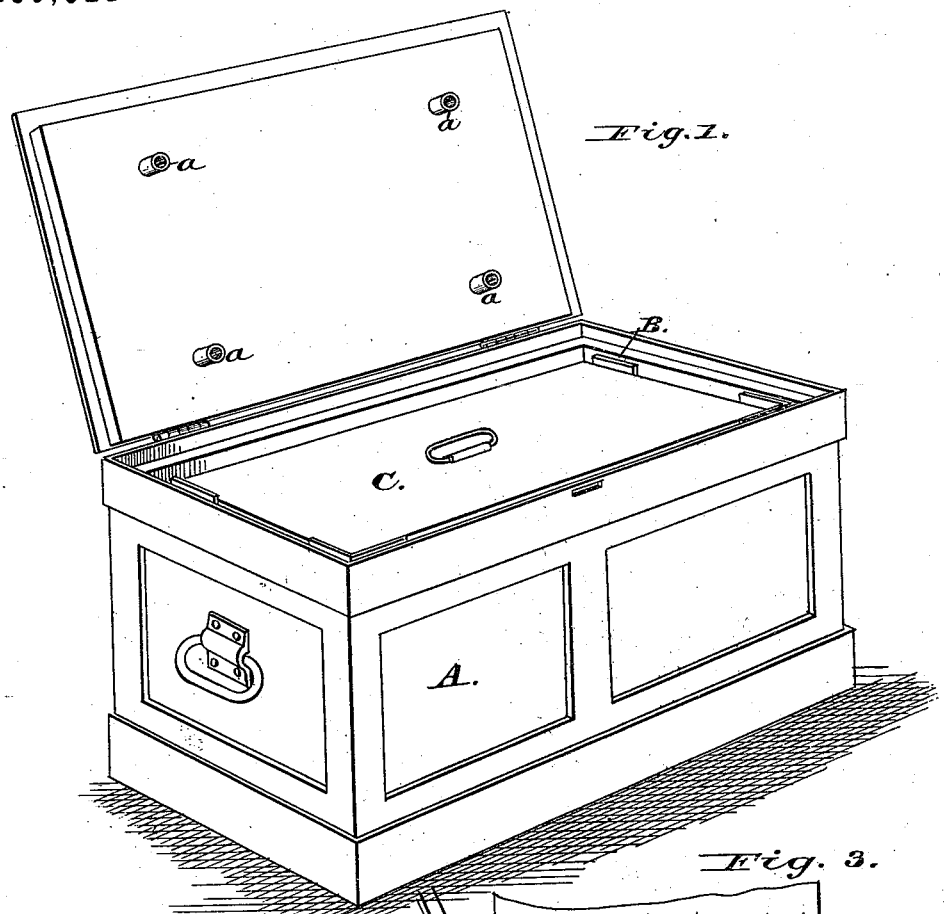


Fig. 2.

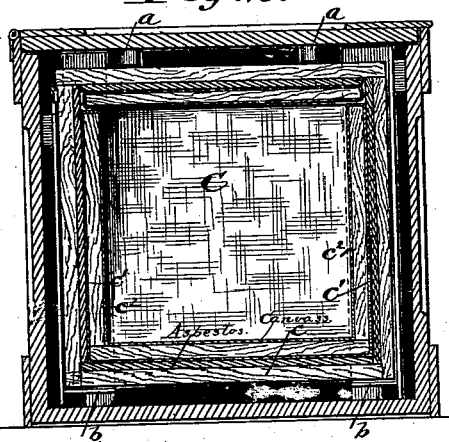
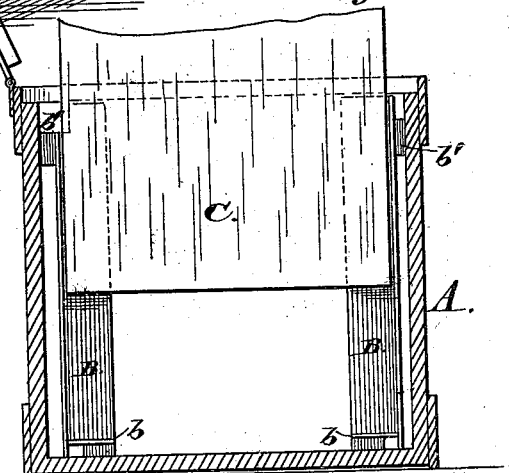


Fig. 3.



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2 Sheets—Sheet 2.

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Fig. 4.

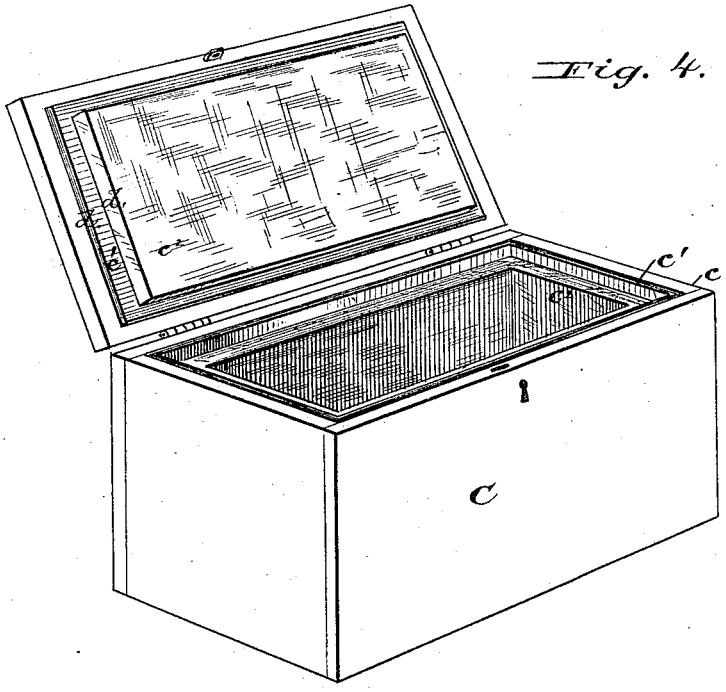
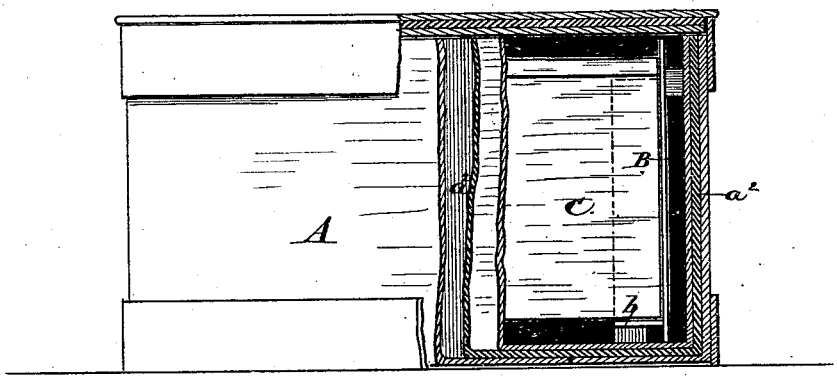


Fig 5



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UNITED STATES PATENT OFFICE.

EDWARD W. GLOVER, OF MALDEN, AND EDWARD C. MORRIS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FIRE-PROOF EXPRESS-CHESTS.

Specification forming part of Letters Patent No. **186,828**, dated January 30, 1877; application filed January 15, 1877.

To all whom it may concern:

Be it known that we, EDWARD W. GLOVER, of Malden, in the county of Middlesex and State of Massachusetts, and EDWARD C. MORRIS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fire-Proof Express-Chests, of which the following is a specification:

This invention relates to an improved chest for transporting valuables from place to place, and is particularly designed for use by express, railroad, and other transportation companies, its object being to provide a comparatively light and roomy fire-proof receptacle for valuable articles of all descriptions, to guard against destruction by the fires attendant upon wrecked vessels or trains.

The invention consists, first, in a fire-proof box or chest for containing valuables, the body of which, together with its cover, is made up of a layer of wood board chemically treated and rendered fire-proof, and a layer of asbestus or clay board, with or without an inner layer of wood board, as more fully hereinafter specified; second, in a box or chest for valuables, composed of layers of material chemically treated to render it fire-proof, and adapted to be secured in an outer casing or safe in such manner as to have a space between the walls of said box or chest and said outer casing, for the purpose of securing the contents against destruction by fire, as more fully hereinafter set forth; third, in the combination, with the outer casing or safe, of a series of angle-plates secured in the corners of said casing on the inside, for the purpose of supporting the inner chest out of contact with the walls of the outer casing, as more fully hereinafter set forth.

In the drawings, Figure 1 represents a perspective view of our improved chest with the lid thrown back. Fig. 2 represents a vertical transverse section, showing the chest and casing or safe combined and ready for use. Fig. 3 represents a transverse vertical section, showing the box or chest partly removed. Fig. 4 represents a perspective view of our improved chest; and Fig. 5, a modification, showing a chest rendered partly burglar-proof, and adapted to be secured permanently in a car or vessel, the inner chest being capable of being removed with its contents.

In the drawings, the letter A represents a rectangular casing or safe of metal, such as ordinarily employed by express and other transportation companies for carrying valuables of all descriptions from place to place. At each corner of said casing or safe, on the inside, is located an angle-plate, B, of metal or other suitable material, with support *b* near the lower end for the bottom of the inner chest C, the said plates B being secured to the walls of the casing or safe A at a convenient distance from the same by means of lugs *b'*, so as to support the inner chest C at a slight distance away from the walls of the outer chest, in order to have an air-space between the walls of the casing or safe A and chest C. The letter C represents the inner chest or casket for holding valuables, which, with its lid, is constructed principally of wood, preferably chemically prepared, as more fully hereinafter described, to resist the action of intense heat. Said inner chest is of such size as to rest within the angles of the angle-plates B, and be held therein away from the walls of the outer casing or safe, being confined therein when the top of the outer casing is secured by means of a series of lugs or projections, *a*, secured to the inside of said top, which rest against the top of the inner chest. The said inner chest C may be constructed simply of wood or other light material, chemically treated, but, in the present instance, is made of an outer wall, *c*, of wood chemically treated to render it fire-proof, and a layer of asbestus or clay board, c^1, with an interior lining, c^2, of wood covered with canvas or other material chemically prepared to render it fire-proof, as shown in Fig. 2 of the drawings.

The wood and canvas of the interior chest are rendered fire-proof by saturating the same with a solution of tungstate of soda, borax, alum, sulphate of copper or ammonia, or by means of any other fireproofing compound; and the outer shell of the inner chest may be further protected by a coating of fire-proof paint, and, where the utmost security is desired, may be provided with a facing of sheet

metal on the outside, which will ward off the heat to a great extent in case of fire.

In the modification shown in Fig. 5 a burglar-proof safe or casing is represented, which is designed to be permanently located in a car or vessel, the outer casing being composed of a series of hardened iron or steel plates, a^2, the inner chest in the present instance being adapted to be removed with its contents, in order to transport the same from the car or vessel to other places.

The top of the inner chest is preferably formed, as shown in Fig. 4, with the double rabbeted edges *d d*, whereby a tight and almost air-proof joint is formed when said lid is closed, the upper edge of the inner shell of the interior chest terminating slightly below the edge of the outer shell of said inner chest, to form a seat for the lid.

The casing or safe and inner chest may be provided with locks or fastening devices of any desired description, and on the inner chest the lock may be secured to the top, in order that said chest may be conveniently locked and unlocked without removing the inner chest; and, in order to permit the lid of the inner chest to be thrown back while in position in the outer casing or safe, the angle-plates at the rear side of the casing or safe may be cut off so as not to interfere with the lid when thus thrown back.

By means of the interior chest or box within the outer casing or safe, with an intervening air-space, it will be evident that a safe will be obtained with sufficient fire-proof qualities to resist the heat of an ordinary burning car, and, as the inner chest is constructed mainly of thin wood, which is, of itself, a poor conductor of heat, but is preferably rendered additionally non-conducting and comparatively fire-proof by chemical treatment, it is evident that the safe can be rendered almost wholly fire-proof, and at the same time be made sufficiently roomy for economical use and sufficiently light to admit of ready handling, unless it is desired to make the safe burglar as well as fire proof, in which case the outer casing is permanently located in the car, and, as the inner chest is readily removable, it is evident that the valuables can be removed to their final destination in such inner case without trouble or inconvenience. It is also designed to construct the inner chest of alternate layers of wood, canvas, and clay or asbestus board, with or without the application to any or all such layers of suitable fire-proof chemicals.

What we claim, and desire to secure by Letters Patent, is—

1. A fire-proof box or chest, the body of which, together with its cover, is made up of a layer of wood board chemically treated and rendered fire-proof, and a layer of asbestus or clay board, with or without an inner layer of wood board, covered with chemically-treated canvas or other material, said box being specially constructed and adapted to fit within a metallic chest or casing, and be transported therein and removed therefrom at will, substantially as set forth.

2. A box or chest for valuables, composed of layers of material chemically treated to render it fire-proof, and constructed so as to be placed within a metallic casing or safe and transported therein, in such manner as to leave an intervening air-space to protect said box or chest and its contents from injury by heat in case of fire, substantially as described.

3. In combination with the outer casing or safe, the angle-plates secured in the corners of said casing or safe and adapted to support the inner chest out of contact with the sides of the said casing, substantially as described.

4. A fire-proof chest, the body of which, together with its cover, is made up of one or more layers of wood board, one or more layers of clay or asbestus board, and one or more intervening layers of canvas chemically treated to render it fire-proof, combined substantially as described.

In testimony that we claim the foregoing we have hereunto set our hands in the presence of the subscribing witnesses.

EDWARD W. GLOVER.
EDWARD C. MORRIS.

Witnesses:
A. H. NORRIS,
D. P. COWL.