

United States Patent Office.

THEODORE HYATT, OF NEW YORK, N. Y.

Letters Patent No. 101,879, dated April 12, 1870.

IMPROVEMENT IN LINING AND COVERING REFRIGERATORS AND REFRIGERATOR-CARS.

The Schedule referred to in these Letters Patent and making part of the same

To whom it may concern:

Be it known that I, THEODORE HYATT, of the city, county, and State of New York, have invented certain new and useful Improvements in Refrigerators and Refrigerator-Cars for preserving meats, butter, milk, fruits, and vegetables from injury or loss by high degrees of atmospheric temperature when in houses, steam, or sail vessels, or being transported on railroads.

My improvement relates to the construction of refrigerators and refrigerator-cars, having their chambers between the inner and outer shells packed or filled with a more perfect non-heat conducting material or materials than any heretofore used for that purpose.

An ingenious manufacturer of this city having recently perfected machinery by which he is enabled to produce felting composed wholly of asbestos, or in part of asbestos and other suitable fibrous material, of various degrees of thickness, I purpose making use of asbestos in this form as a packing, filling, or lining for refrigerators, refrigerator-cars, and fire-proof safes.

To enable others skilled in the art to which my invention applies to make use of said invention, I will describe the same.

In constructing refrigerators for houses or vessels, I make them in the usual way, composed of two rectangular boxes to fit one within the other, the inner box being about three inches smaller in every direction than the outer box, thus providing a chamber between them on all sides of about three inches in width, the cover or lid of the inner box also being constructed of double shells with chamber between, and about three inches, and of suitable length and width.

The refrigerators on trucks for railroad transportation are constructed in similar manner, having an inner and outer shell of proper length and width, with a chamber between them in every direction about six inches wide, and provided with doors at the sides for convenience of loading and unloading the freight, which doors are also hollow, with chambers between their shells about two inches wide.

The refrigerators and refrigerator-cars being constructed substantially as described, I proceed to fill in, line, or pack the chambers between the inner and outer shells of the same with the fibrous non-heat-conducting mineral known as asbestos, using it of any suitable form or condition best adapted for the situation, as in blocks, slabs, crushed, ground, or a felted or woven fabric.

I also fill in, line, or pack the chambers of refrigerators and refrigerator-cars with asbestos, as described, combined with other non-heat-conducting materials in the proportions of three parts of asbestos to two parts of plaster of Paris, Rosendale cement, sawdust, tan-bark, or crushed charcoal well mixed together.

I also make blocks or slabs of suitable sizes, com-

posed of asbestos combined with either of the last-named non-heat-conducting materials in the proportions mentioned, and mixed with sufficient water to allow the mass to be pressed into molds like bricks, and then put into ovens or kilns to remain there until the water is expelled by heat, when they are taken out in a very light porous condition suitable for lining or packing the chambers of refrigerators, refrigerator-cars, and fire-proof safes, the joints of the blocks being luted with thin paste of the same materials.

Another mode I pursue is to cover or sheath the interior surfaces looking into the chambers between inner and outer shells of the refrigerators and refrigerator-cars with asbestos or asbestos fabric, while at same time filling or packing the intermediate space between said sheathings with other non-heat-conducting substances, like saw-dust, charcoal, tan-bark, plaster of Paris, Rosendale cement, or a combination of these materials.

The object and purpose for which I use the heretofore described, superior non-heat-conducting materials to fill, line, or pack the chambers of refrigerators and refrigerator-cars, are to retard and prevent the rapid transmission of heat from the external atmosphere to the cavities of the interior vessels where all articles to be preserved from injury or loss by heat are placed.

I do not confine myself to the above-described dimensions of the chambers, or to the precise proportions mentioned of the materials used to fill or pack said chambers, as they may be varied to any extent found most desirable.

Having fully described my invention,

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

1. The construction of refrigerators and refrigerator-cars, when the chambers between their inner and outer shells are filled, lined, or packed with asbestos of any suitable form or condition.

2. The construction of refrigerators and refrigerator-cars, when the chambers between their inner and outer shells are lined, filled, or packed with asbestos combined with any other non-heat-conducting substances, as heretofore described.

3. The construction of refrigerators and refrigerator-cars, when the chambers between their inner and outer shells are filled, lined, or packed with bricks, blocks, or slabs composed of asbestos and other non-heat-conducting materials, as heretofore set forth.

4. The construction of refrigerators and refrigerator-cars, when the surfaces of the inner and outer shells looking into the chambers between them are covered or sheathed with asbestos or asbestos fabric, as mentioned, and the space between said sheathings are filled with other non-heat-conducting materials, as heretofore described.

THEODORE HYATT.

Witnesses:

E. P. STARR,
J. JACOBS.