

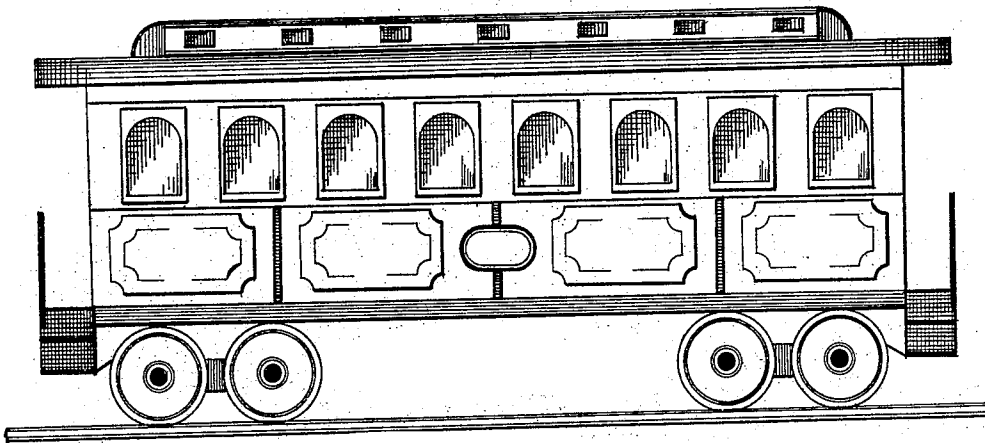
2 Sheets—Sheet 1.

J. BUDD.  
GLASS PANELS.

No. 178,904.

Patented June 20, 1876.

*Fig. 1*



Witnesses;

*L. Thompson.*  
*Jno. H. Manning*

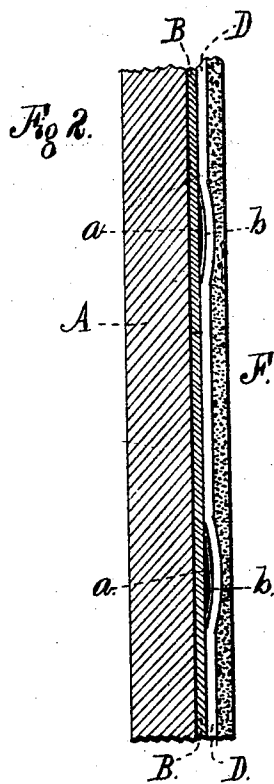
Inventor;

*James Budd*  
*By A. L. Thompson,*  
*Atty.*

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GLASS PANELS.

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Witnesses;  
*Sam. Wilkinson*  
*Geo. H. Manning*

Inventor;  
*James Budd*  
*Edw. L. Thompson,*  
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# UNITED STATES PATENT OFFICE.

JAMES BUDD, OF NEW YORK, N. Y.

## IMPROVEMENT IN GLASS PANELS.

Specification forming part of Letters Patent No. **178,904**, dated June 20, 1876; application filed April 1, 1876.

### *To all whom it may concern :*

Be it known that I, JAMES BUDD, of the city, county, and State of New York, have invented certain new and useful Improvements in Panels for Railroad-Cars, of which the following is a specification:

This invention relates to the construction of the exterior panels of railroad-cars, and it is particularly designed for that class known as "palace," "parlor," and "sleeping" cars. It consists in dispensing with the usual varnished hard-wood panels, and substituting therefor glass panels suitably ornamented on the interior surface, in the manner as will be hereinafter fully pointed out and claimed.

In the drawings, Figure 1 represents a side elevation of an ordinary passenger-car in which is fully embodied my invention; and Fig. 2 represents an enlarged cross-section of a glass car-panel, showing the application of the ornamenting material.

The present method of finishing the exterior panels of the expensive classes of railroad-cars known as "palace," "parlor," and "sleeping" cars, by means of hard-wood panels which are highly polished and varnished, has many difficulties, the obviating of which is a great desideratum. It is desirable to have them always present a new and bright appearance, and in the process of cleaning the exterior coating of varnish is quickly dulled and worn off, exposing the wood, which quickly deteriorates by the action of the elements, thus necessitating the frequent withdrawal of the car from duty for the purpose of revarnishing and repairs.

In carrying out my invention I dispense with the exterior wood paneling of the car, and insert in the frames or moldings glass panels, which are ornamented on their rear surface with such stripes, figures, designs, or imitations of wood as may be desired.

In the process of ornamentation, the panel of glass is first thoroughly cleaned. It is then coated with white shellac varnish, which is flowed on the surface, so as to insure an even coating. When dry, the ornamental stripes or colored figures or designs are painted upon the shellaced surface in oil-colors, as fancy or taste may call for. These stripes and figures, when dry, are then covered with shellac

varnish, so that the entire surface presents a clear surface of varnish, upon which the final coating of color is applied over the entire surface. This final color is preferably ground in a solution of acetic acid and gelatine, and then mixed with the dry colors, the coat being applied to the prepared shellaced surface of the glass with a brush, in the ordinary manner. When dry, this final coat of color is entirely covered with a coating of thick shellac varnish, the alcohol being evaporated therefrom, so as to leave it in a thick pasty condition, which is immediately coated with plaster-of-paris. This may be applied or sifted on by any means desired, so that it is evenly deposited. The shellac at once absorbs the plaster-of-paris, the combination of the two drying quickly and forming an impervious coating.

In Fig. 2 of the drawings the applications of these various coatings to the glass are shown, the same being drawn on an enlarged scale, for the purpose of plainly indicating each stage of the process and application. A represents the glass; B, the first coating of shellac varnish; *a*, the ornamental striping, figures, or designs; *b*, the coating of shellac varnish applied over them for the purpose of making their rear surface identical with the previously-coated surface of the glass. D represents the final or body coating of plain color, and F the final or finishing coating of impervious matter.

The object of first coating the glass with shellac varnish is to provide a suitable base upon which to lay the oil-colors, which shall prevent the paint from blistering or peeling off by the action of the sun, or from other exposure, which would occur were the oil-colors laid directly upon the glass surface. The stripes and ornamental designs in oil-colors, after being laid, are also covered with shellac, so as to make the entire surface alike for the application of the final coat of coloring. The finishing coating of shellac and plaster-of-paris is for the purpose of preventing any dampness from reaching the colors in case any water should get in between the glass panel and the wood backing forming the interior of the car.

I make no changes in the general construc-

tion of the car, merely omitting the exterior wood panels.

The glass panels may be set into a bed of any elastic material attached to the moldings which will give tight but elastic joints, and also provide for any variations caused by expansion and contraction.

It is plainly apparent that a car provided with these glass panels, ornamented as described, will always appear new and bright on its exterior, and that but a trifling amount of labor will be required to keep them clean.

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

1. The process of manufacturing ornamental glass panels, consisting of, first, coating the back of the glass with shellac varnish; second,

applying the design thereon in oil-colors; third, again coating the whole with shellac; fourth, applying a coat of coloring, and, finally, backing the whole with thick shellac varnish and plaster-of-paris, substantially as and for the purposes set forth.

2. As an improved article of manufacture, a glass panel having on its back a coating of shellac varnish, a design in oil-color, a second coat of shellac, a coat of coloring, and a backing of thick shellac varnish and plaster-of-paris, substantially as and for the purposes set forth.

JAMES BUDD.

In presence of—

A. L. MUNSON,  
E. G. WARD.