

(No Model.)

H. S. TIPTON.

CAR ROOF.

No. 299,597.

Patented June 3, 1884.

Fig. 1.

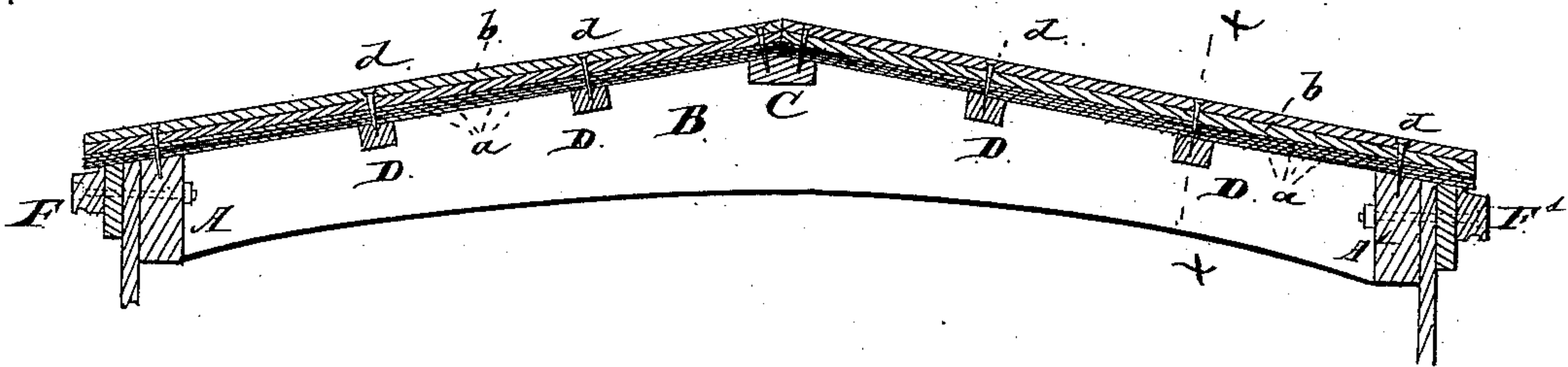
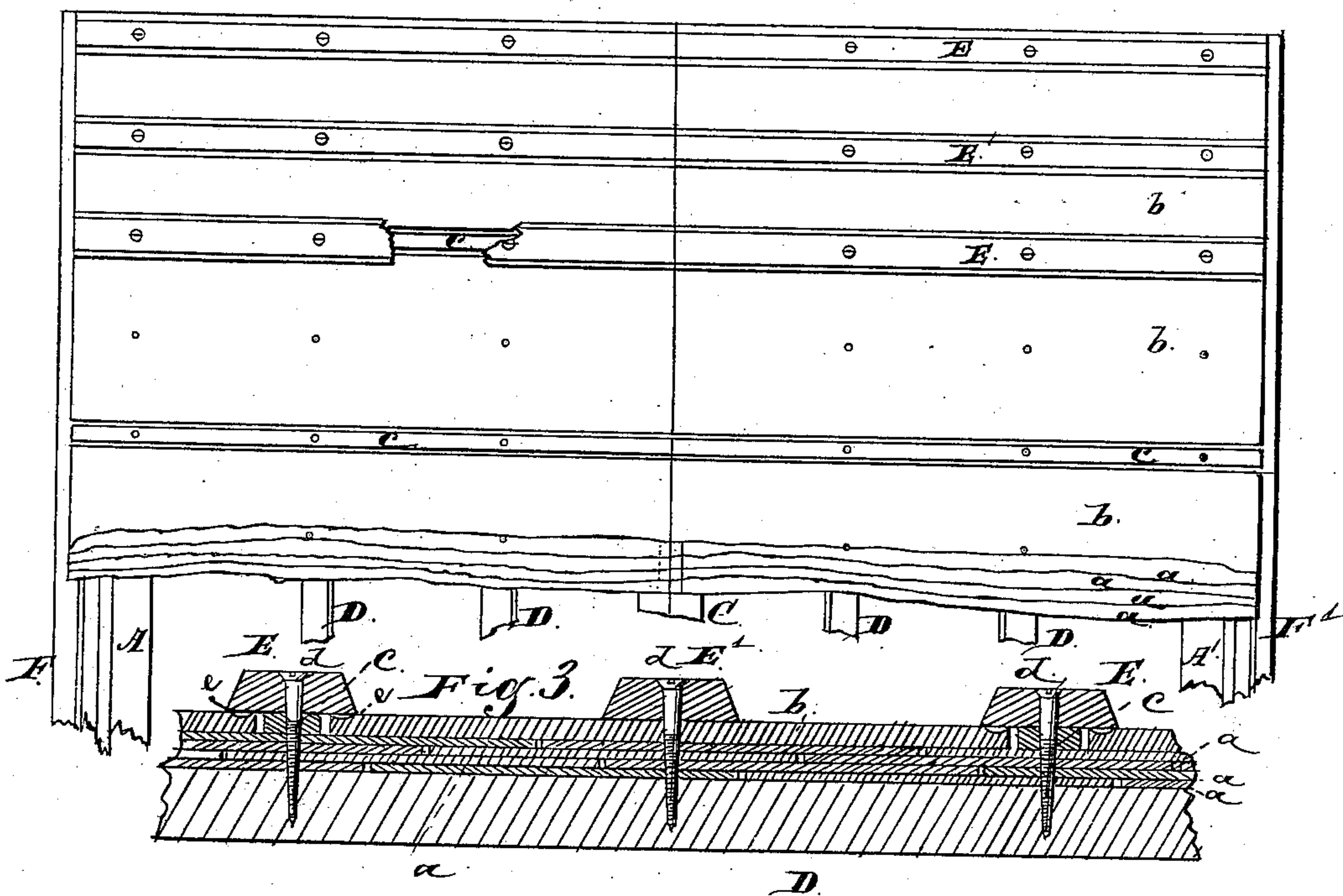


Fig. 2.



Witnesses:
Albert H. Adams.
O. W. Bond,

Inventor:
Hiram S. Tipton

UNITED STATES PATENT OFFICE.

HIRAM S. TIPTON, OF CHICAGO, ILLINOIS.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 299,597, dated June 3, 1884.

Application filed January 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, HIRAM S. TIPTON, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Car-Roofs, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical cross-section. Fig. 2 is a top view. Fig. 3 is an enlarged section at line *x x* of Fig. 1.

I have heretofore made application for Letters Patent for an improvement in car-roofs, in which I described a roof constructed in many respects in a manner similar to that herein described. As described in my former application, the car-roof was composed of a number of thin strips of wood overlying each other, the whole covered by a series of heavy battens, the thin strips being so arranged that the holding-screws pass through the center of the thin strips in one layer and between the edges of the thin strips in the next layer.

The object of my present invention is to construct a car-roof which is made of a series of thin strips of wood placed one over the other, and secured by battens and screws in such a manner that the holding-screws will pass through all of the thin strips, instead of between the edges of the thin strips in the alternate layers, so that each thin strip will be securely held by screws, the construction also being such that the thin strips can shrink and swell without danger of splitting the same and without danger of leakage, which I accomplish as hereinafter set forth.

In the drawings, *A A'* represent two side plates of a car-body.

B are cross-pieces or rafters.

C is a longitudinal center-piece, which supports the upper ends of the roof-boards.

D are longitudinal strips which support the roof-boards. These parts are all constructed as usual, and require no further description. The plates *A A'* are supported and connected with the car-body in the usual manner.

F F' are longitudinal side strips secured to the body of the car in the usual manner.

a are thin pieces of wood about one-eighth of an inch thick and about six and one-fourth inches wide, as shown in the drawings. As

shown, there are four thicknesses of these narrow strips placed over the whole car; and to provide for swelling there is a little space between the edges of the adjoining strips. The strips of each series above the first are arranged so as to break joints with the strips in the series next below. I arrange the several layers so that the joints in any one layer do not come directly over the joints in any other layer, but arrange them substantially as shown in Fig. 3.

b are strips of wood about three-eighths of an inch thick, and, as shown, about eleven and one-half inches wide, which pieces *b* rest upon the upper layer of the narrow strips *a*.

c are strips of wood about one inch wide and three-eighths of an inch thick, placed between the strips *b*, with small spaces between the edges of *b* and *c* to allow for swelling.

E are battens, having, as shown, beveled edges. They are about two and one-half inches wide at the lower edge and about five-eighths of an inch thick. I place one of these battens directly over the strips *c*, and they are wide enough to overlap the adjoining edges of the strips *b*. I also place a similar batten, *E'*, midway between those which are over the pieces *c*.

d are lag-screws, by means of which the battens and the strips *a b c* are secured in place. These lag-screws pass through the battens *E*, through the center of the strips *c*, beneath the battens *E*, and through the narrow strips *a*, which are beneath the strips *c*. The lag-screws which pass through the intermediate battens, *E*, pass through one of the strips *b*, and through the narrow strip *a* below.

When the several parts are arranged as shown and described, all the lag-screws which pass through any one of the strips *a* will be in the same longitudinal line, as shown in Fig. 1, and in no case will there be two lag-screws passing through the same strip *a* in different longitudinal lines; and as there is a little space between the edges of the adjoining strips *a*, provision is made for swelling and shrinking without danger of splitting these narrow strips. If the holding-screws passed through these narrow strips in different longitudinal lines, they would crack and split in consequence of swelling and shrinking.

Near the ends of the strips *b*, I provide

grooves *e*, to catch and carry off any water which might work beneath the edges of the battens *E*.

I do not limit myself to the use of lag-screws as fastenings, although I know of nothing better. Any other suitable known fastening may be used.

What I claim as new, and desire to secure by Letters Patent, is as follows:

10 A car-roof composed of two or more thicknesses of thin strips, *a*, in combination with

strips *b* and battens, all arranged and held in place substantially as described, whereby the lag-screws or other fastenings do not pass through any one of the strips *a* in more than one line, substantially as and for the purposes specified. 15

HIRAM S. TIPTON.

Witnesses:

ALBERT H. ADAMS,
O. W. BOND.