

(No Model.)

H. S. TIPTON.

CAR ROOF.

No. 299,596.

Patented June 3, 1884.

Fig. 1.

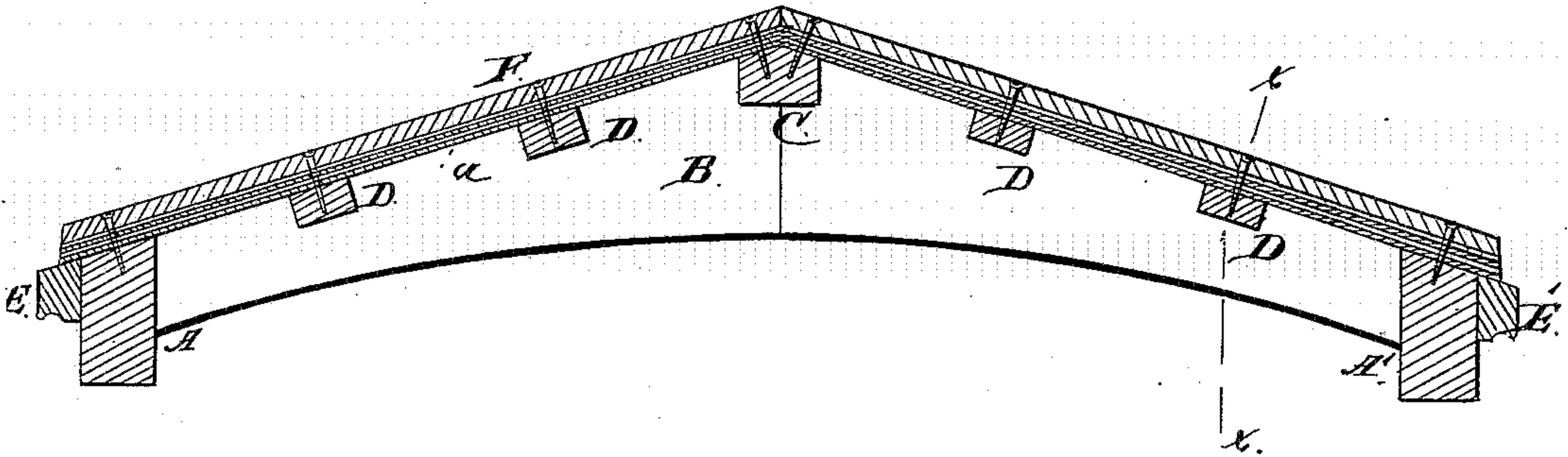


Fig. 2.

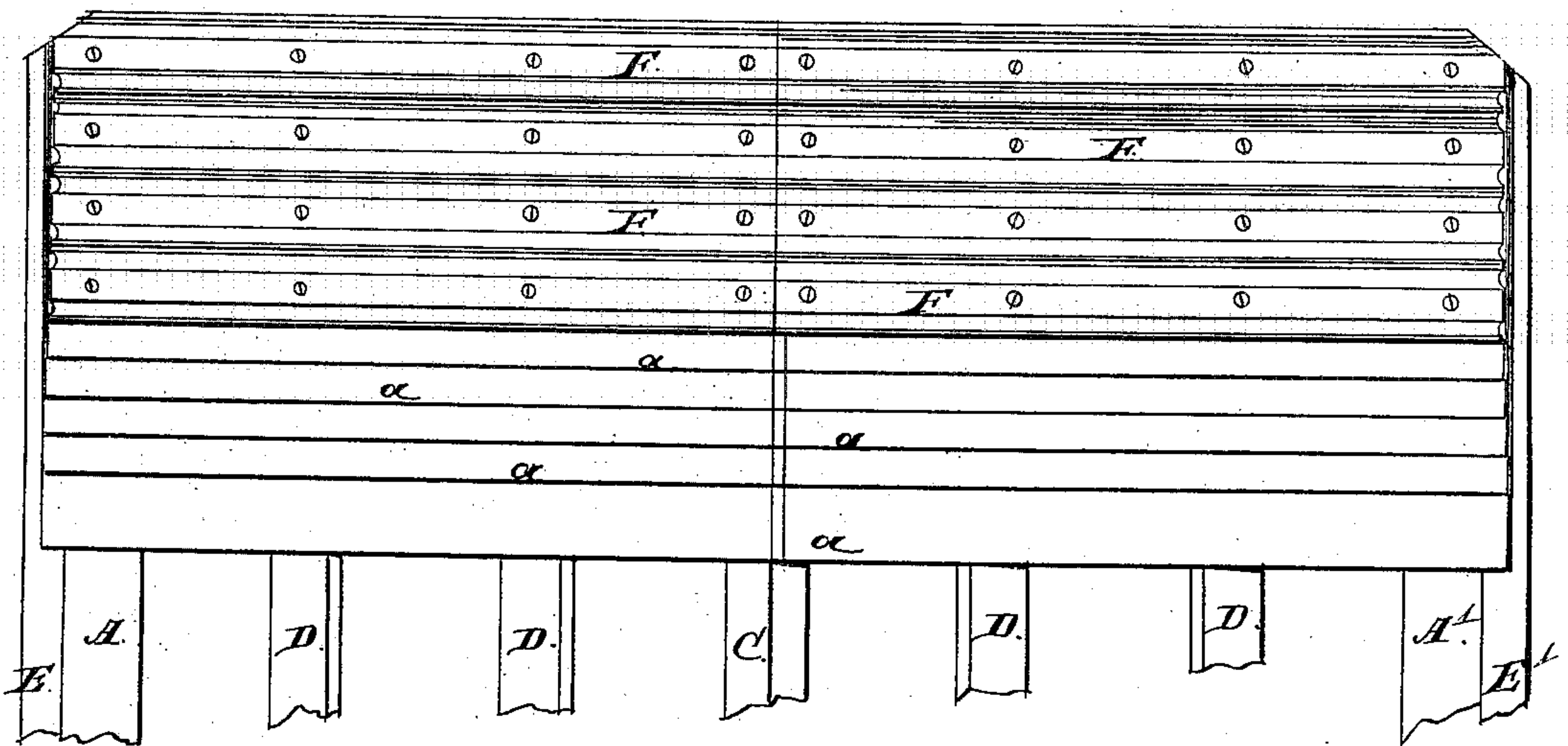
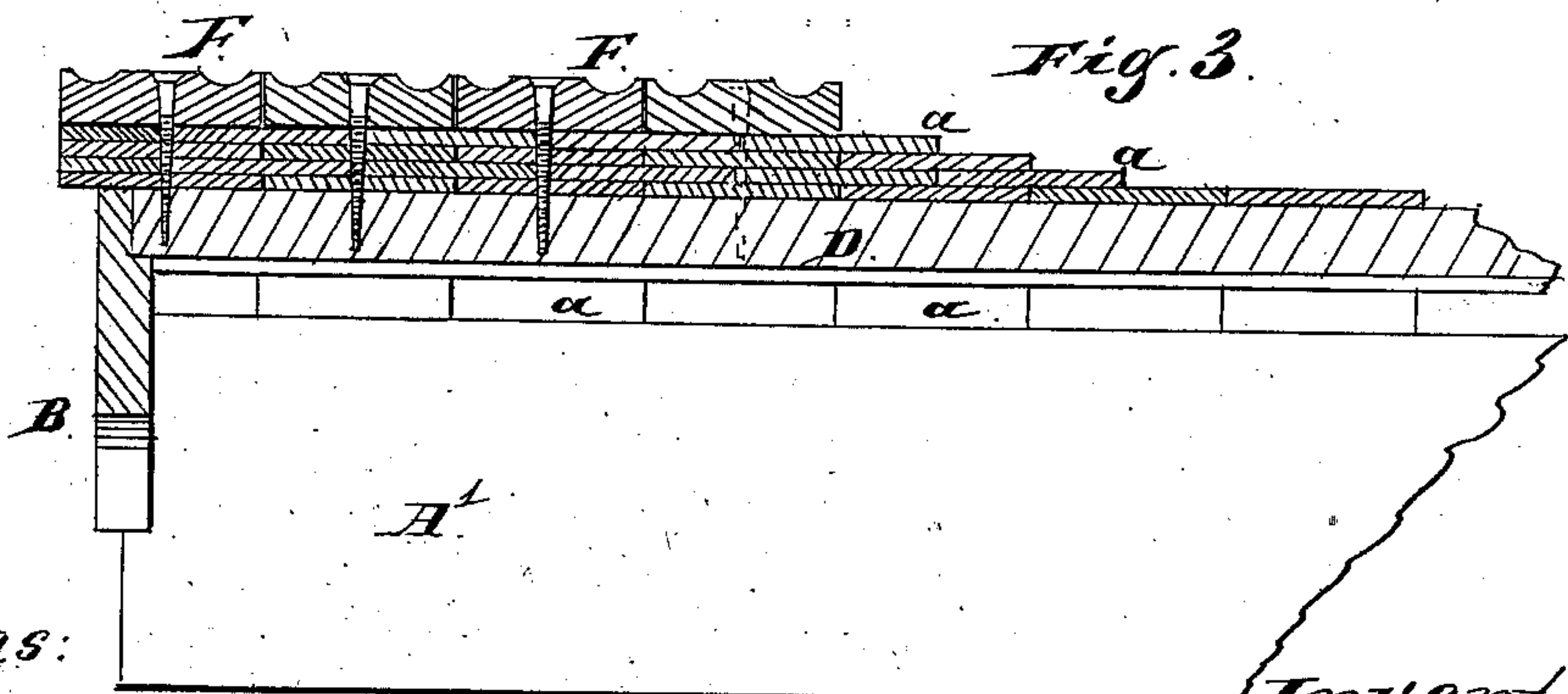


Fig. 3.



Witnesses:
Albert H. Adams.
B. A. Price.

Inventor
Hiram S. Tipton,
By West & Bond,
His attys.

UNITED STATES PATENT OFFICE.

HIRAM S. TIPTON, OF CHICAGO, ILLINOIS.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 299,596, dated June 3, 1884.

Application filed October 26, 1883. (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, and Fig. 3 is a section at line *x* of Fig. 1.

The leading object of my invention is to construct a car-roof which is made of wood in such a manner that there will be opportunity for the several pieces of the roof to shrink and swell without splitting the same, and without danger of leakage, and at the same time to provide a roof which will thoroughly protect the contents of the car; and this I accomplish by covering the car with two or more thicknesses of thin narrow pieces of wood and placing narrow battens over the same, the battens and the several thin pieces being all secured in place by means of screws, which pass through the center of the battens, and through the center of the strips and between the edges of the same, all as hereinafter more fully described. I also provide for protecting the ends of the roof-boards, as hereinafter set forth.

In the drawings, A A' represent the 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. All these parts are constructed in the usual manner, and I therefore give no further description of them; neither have I shown how the plates A A' are supported and connected with the car-body.

E E' are side strips secured to the plates A A' in the usual manner.

a are thin narrow pieces of wood—say about one-eighth of an inch thick and three inches wide. As shown in the drawings, there are four thicknesses of these narrow strips placed over the whole car, the edges of each series of strips being placed close together. Each series of strips above the first are arranged so as to break joints with the series next below, as shown in Fig. 3.

F are battens, the same width as the narrow strips *a*, and about three-fourths of an inch thick. The battens and the narrow thin strips are all held in place by means of lag-screws, which pass through the center of each batten, between the narrow strips in the first series below the battens, through the center of the narrow strips in the next series of narrow strips below, between the joints of the next of the series of narrow strips next below, and through the center of the lower series of narrow strips. The lag-screws of course pass into the plates and longitudinal pieces C D. These screws, it will be seen, pass directly through the center of the battens, and either between the edges or directly through the center of the thin narrow strips.

I thus provide a strong car-roof, the several joints of which are well protected, each piece of which can shrink and swell without danger of splitting. The battens and the thin strips through which the screws pass directly will of course be held in place by the screws. The remaining strips, through which the screws do not pass, will also be held in place by the screws, which are of considerable size, one half of each screw being embedded in the edge of the strip upon one side of the joint, and the other half in the edge of the adjoining strip, so that the strips through which no fastening passes will nevertheless be held firmly in place, and these strips, as well as those through which the screws pass at the center, can expand and contract without danger.

I have shown four series of thin narrow strips in Fig. 1, two of which are in section and two in elevation. I think that in practice three thicknesses of the thin narrow strips in connection with the batten will be sufficient. The principle of my invention can be used with two thicknesses of thin strips. When less than four thicknesses of thin narrow strips are used, the principle of construction is to be the same—that is to say, the screws are to be passed either through the center of the strips or between the same.

It has been customary to have the roof-boards project a little beyond the pieces E E', and in consequence of careless switching it frequently happens that the ends of the roof-boards come in contact with the adjoining car, and are

thereby split or broken, causing the roof to leak, and requiring constant repairs. I avoid this difficulty by terminating the ends of the roof-boards a little back from the outer edges of the strips E E', as shown in Fig. 1, so that it will be impossible for the ends of the roof-boards to be injured by careless switching.

I do not limit myself to the use of lag-screws as fastenings, although I think them better than anything else. Of course, bolts might be used.

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

1. A car-roof composed of two or more thicknesses of thin narrow strips, *a*, in combination with battens *F*, such thin narrow strips and the battens being of uniform width, and

arranged over each other so as to break joints, all held in place by screws or bolts, which pass through the center of the battens, and between the edges of one series of strips and through the center of another series of strips, substantially as and for the purpose specified.

2. In a car-roof, the thin narrow strips *a* and the battens *F*, having their outer ends terminating back of the outer edges of the side strips, E E', for the purpose of protecting the ends of the roof-boards from injury, substantially as specified.

HIRAM S. TIPTON.

Witnesses:

ALBERT H. ADAMS,
O. W. BOND.