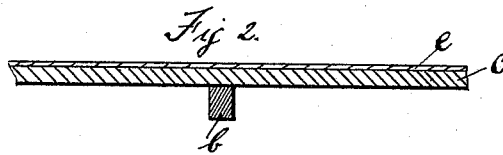
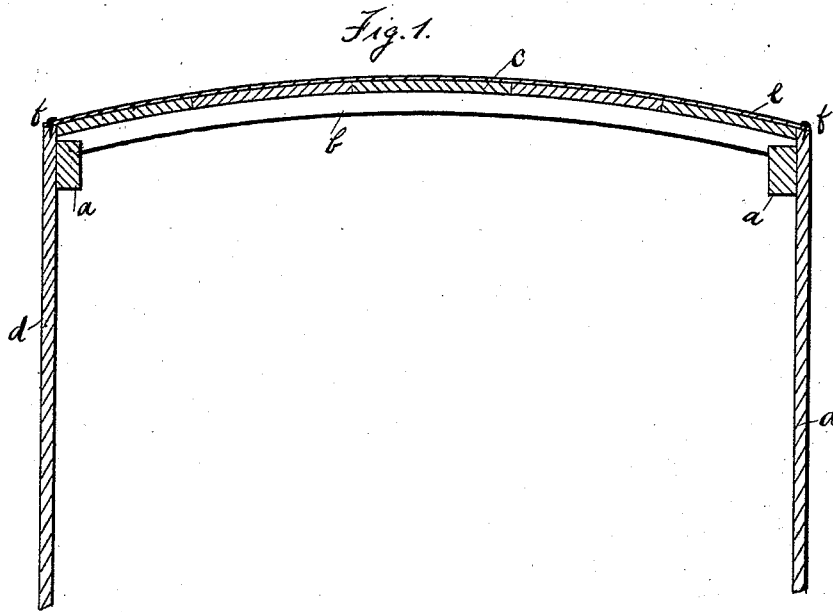


(No Model.)

J. H. FICKEN.  
VEHICLE ROOF.

No. 419,759.

Patented Jan. 21, 1890.



Witnesses:

*Frederick Hempel*  
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# UNITED STATES PATENT OFFICE.

JOHN H. FICKEN, OF JERSEY CITY, NEW JERSEY.

## VEHICLE-ROOF.

SPECIFICATION forming part of Letters Patent No. 419,759, dated January 21, 1890.

Application filed May 24, 1889. Serial No. 312,000. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. FICKEN, of Jersey City, New Jersey, have invented a new and useful Improvement in Vehicle-Roofs, of which the following is a specification.

Figure 1 is a cross-section of a carriage-top containing my invention. Fig. 2 is a longitudinal section of a portion of the roof.

*a* is a frame. *b* are the ribs by which the roof-boards are supported. *c* are the roof-boards. *d d'* are the side panels, which extend up flush with the top of the roof-boards. All of the above parts are arranged, as heretofore, in an ordinary coach or other vehicle.

*e* is a covering of sheet-lead rolled out to about one thirty-second of an inch in thickness and covering the whole vehicle-top and extending out over the side panels *d*, to which its edges are secured by tacks *f*.

Before the sheet-lead *e* is applied the top boards *c* are covered with a coating of cement calculated to produce close adhesion between the sheet-lead and the top boards. This cement may consist of a mixture of two-thirds white lead and one-third ordinary coach-varnish. After this coat is applied the sheet-lead is placed smoothly in position, and upon the drying of the cement it will adhere closely to all parts of the boards. I next apply three coats of white lead; next two coats of rubbing-varnish, which I rub with pumice-stone until it has acquired a smooth and uniform finish. I next apply a coat of finishing-varnish, when the job is complete.

I am of course aware that metal has been used for roofing; but the sheet-lead which I employ would be useless for the purpose if applied like ordinary metal roofing, because it is only by virtue of the peculiar manner in which I apply it by cementing all parts to

the top boards that I am enabled to give it sufficient strength to stand the rubbing required in finishing and other forces brought to bear upon it, and at the same time have it sufficiently thin to be practicable as a portion of the roof of a vehicle. The cementing of all parts of the sheet-lead to the roof-boards also, in case the lead should be perforated at any point, prevents the spread of moisture entering at that point between the lead and the roof-boards.

I am also aware that vehicle-tops have been covered with textile material; but I have found that a coach-top constructed according to my invention is infinitely superior for the following reasons: It tends to avoid cracking or expansion and contraction. Paint or varnish will adhere to its surface without peeling off or blistering. It is perfectly pliable, so as to accommodate itself to the surface of the roof-boards. In case it becomes perforated or torn it can be readily soldered. It is not liable to decay nor rust.

I claim—

1. The improvement in vehicle-roofs, which consists in the combination of the boards thereof and an upper covering of sheet-lead cemented to said boards by an intermediate coat of adhesive substance, substantially as described.

2. In combination with the roof-boards of a vehicle-body, a sheet-lead covering, an interposed layer of adhesive substance cementing the lead to the boards, and an outer coating upon the lead composed of white lead and varnish, substantially as described.

JNO. H. FICKEN.

Witnesses:

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