

(No Model.)

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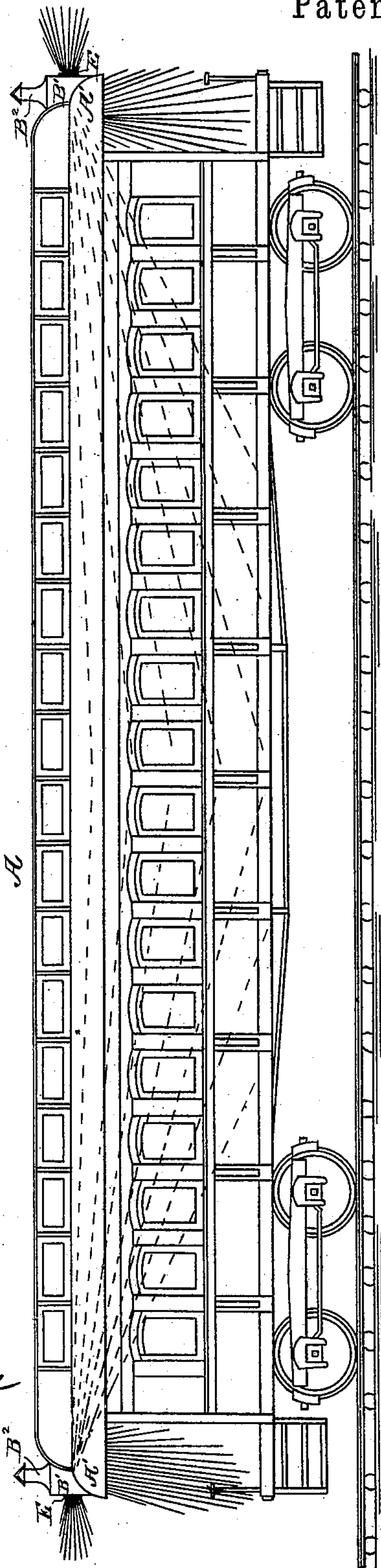
J. HAISH.

MEANS FOR LIGHTING RAILWAY COACHES.

No. 361,220.

Patented Apr. 12, 1887.

Fig. 1.



WITNESSES—

*M. A. Burn*  
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INVENTOR—

*Jacob Haish*  
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(No Model.)

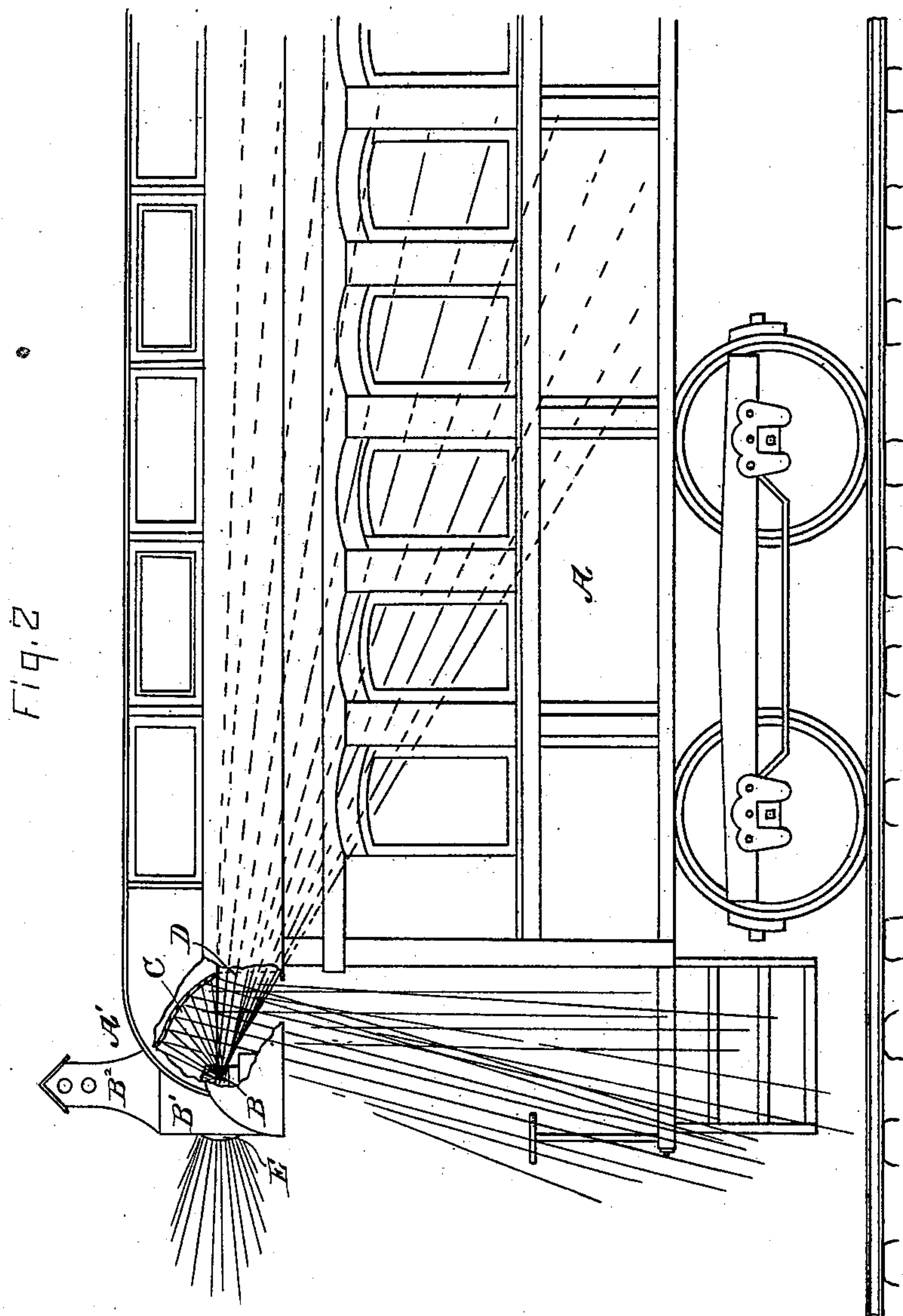
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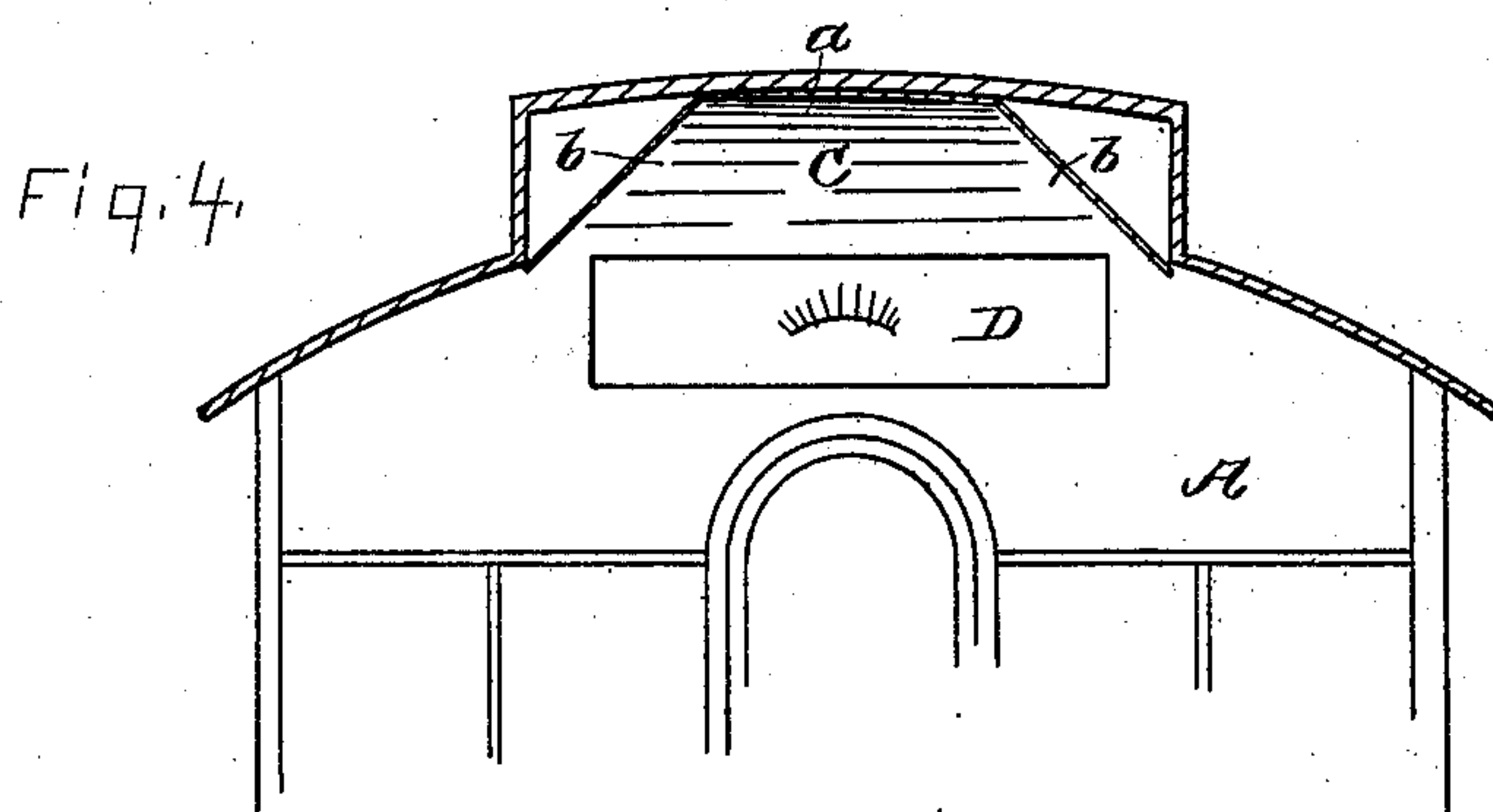
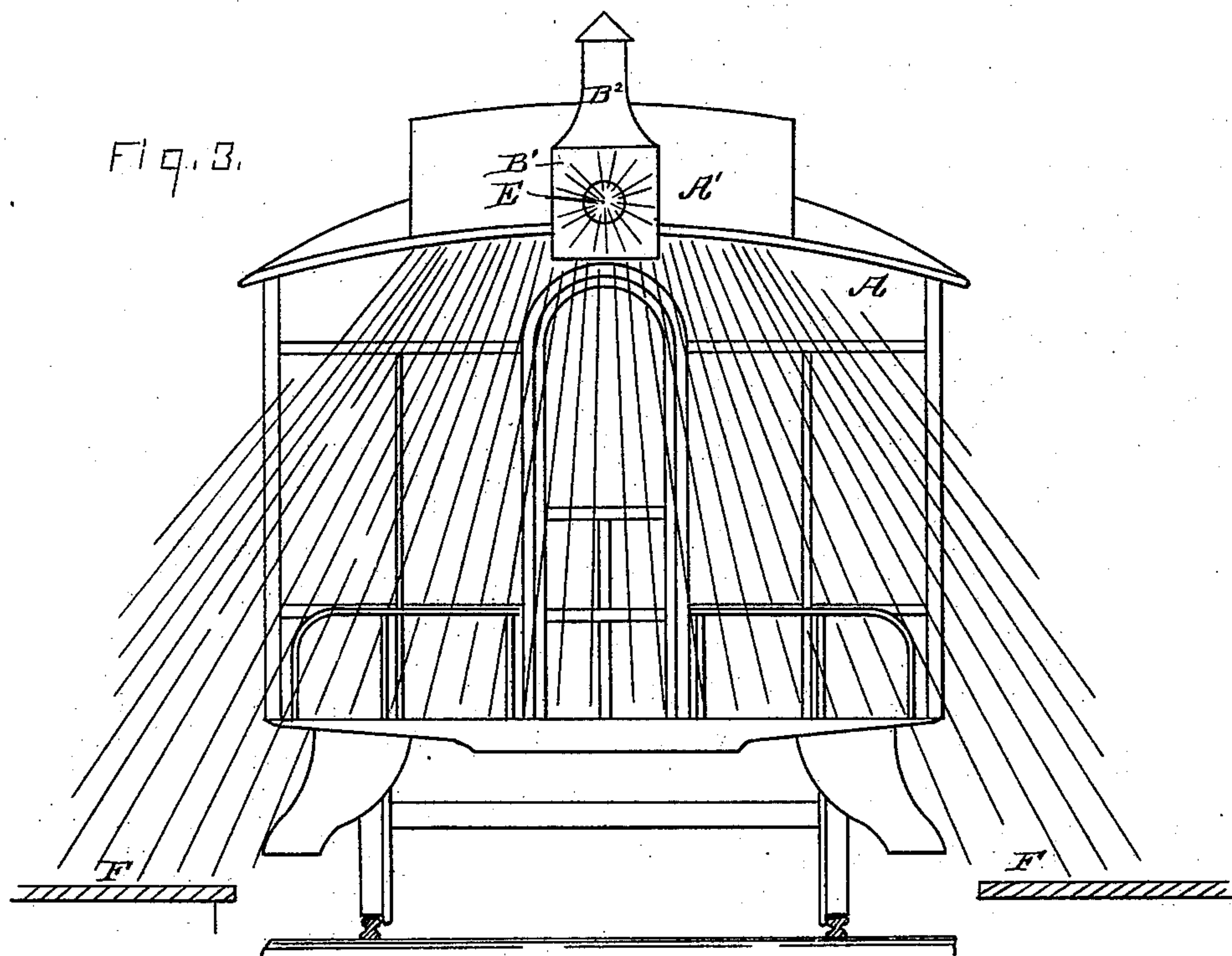
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# UNITED STATES PATENT OFFICE.

JACOB HAISH, OF DE KALB, ILLINOIS.

## MEANS FOR LIGHTING RAILWAY-COACHES.

SPECIFICATION forming part of Letters Patent No. 361,220, dated April 12, 1887.

Application filed October 14, 1886. Serial No. 216,282. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB HAISH, a citizen of the United States, residing at De Kalb, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Lighting Railway-Coaches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in simultaneously lighting the interior of the railway-coach and the platform, also in using the same light for a train-signal, all as will now be fully set out and described, reference being had to the accompanying drawings.

Figure 1 is a side elevation of a railway passenger-coach provided with my invention. Fig. 2 is a side elevation of one end of the car with portions broken away. Fig. 3 is an end elevation of a coach provided with my invention. Fig. 4 is a cross-section between the lamp and the coach.

A is the ordinary railway passenger-coach.

A' is the hood, or the portion of the roof of the coach which projects over and serves as a roof for the end platform. In the hood A' is suitably placed the lamp B, which may be an electrical, gas, or oil lamp.

B' is the lantern, in which the lamp B is properly seated, and which lantern is provided with the external chimney or escape, B<sup>2</sup>.

C is a reflector placed above the lamp B, and between the latter and the main body of the car, so that the base of the lamp shall not intercept the downward-reflected rays. The reflector C can be furnished with any suitable reflecting-surface, and is placed in such positions relative to the lamp as that the rays from the latter are reflected downward, and also outwardly, as shown in Fig. 3. To this end the reflector C is composed of three reflecting-surfaces, which may be integral or separate, the central portion, *a*, being horizontal, and the sides *b b* sloping downward, respectively, from each end of the part *a*, as shown in Fig. 4. Of course the under side, C', of the reflector C is the reflecting-surface. Each part

*b* reflects the rays which fall upon it to the steps and ground-platform on the opposite side of the coach. The central portion, *a*, reflects the rays thrown upon it directly downward upon the coach-platform.

The central portion, *a*, of the reflector C is slightly concaved transversely on its reflecting-surface C', and is placed with its inner edge somewhat lower than its outer one, in order to throw the rays somewhat under the lamp B and outward from the car. (See Fig. 2.)

The bottom of the hood A' is left open.

D is an opening into the car, Fig. 4, below the reflector C, to permit a portion of the rays from the lamp B to enter and illumine the interior of the coach. The opening D is covered with a suitable glass to exclude the cold air and the smoke or smell from the lamp.

E is a red glass set in the outside of the lantern B', to serve, when at the rear of the train, as a warning-signal to succeeding trains. This light, from the fact of its altitude and that it is located centrally between the rails, is in better position to be seen than the usual red lights on the rear platform. When at the front end of the car, it can be concealed by an external slide, if desired.

F F represent the ground-platforms at the depot.

One special advantage of the lamp B, so far as lighting the interior of the coach is concerned, lies in avoiding the stench and smoke of interior lamps and their heat in warm weather.

I am aware that heretofore lights have been used on cars designed to illuminate at once the platform and the interior.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a railway-coach, and in combination with its hood A', a reflector, C, having three reflecting-surfaces—viz., the central and horizontal one, *a*, and the side ones, *b*, sloping downwardly from *a*—and the lantern B' and lamp B, substantially as and for the purposes specified, whereby the lamp and reflector are combined with a car-hood of ordinary construction, so as to light the interior of the car and the platform and cast forwardly horizontal rays of light.

2. In combination with the ordinary hood,

A', of a railway-coach, said coach being provided with opening D, the lantern B' and the lamp B, the reflector C, having angular and concaved surfaces and placed above the opening D, which communicates with the interior of the car, and the signal-glass E, the several parts arranged and combined as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB HAISH.

Witnesses:

CHARLES H. SALISBURY,  
SAML. P. BRADSHAW.