(No Model.) 2 Sheets—Sheet 1.

J. PINTSCH.

Lantern for Railway Cars and Other Vehicles.

No. 242,974. Patented June 14, 1881.

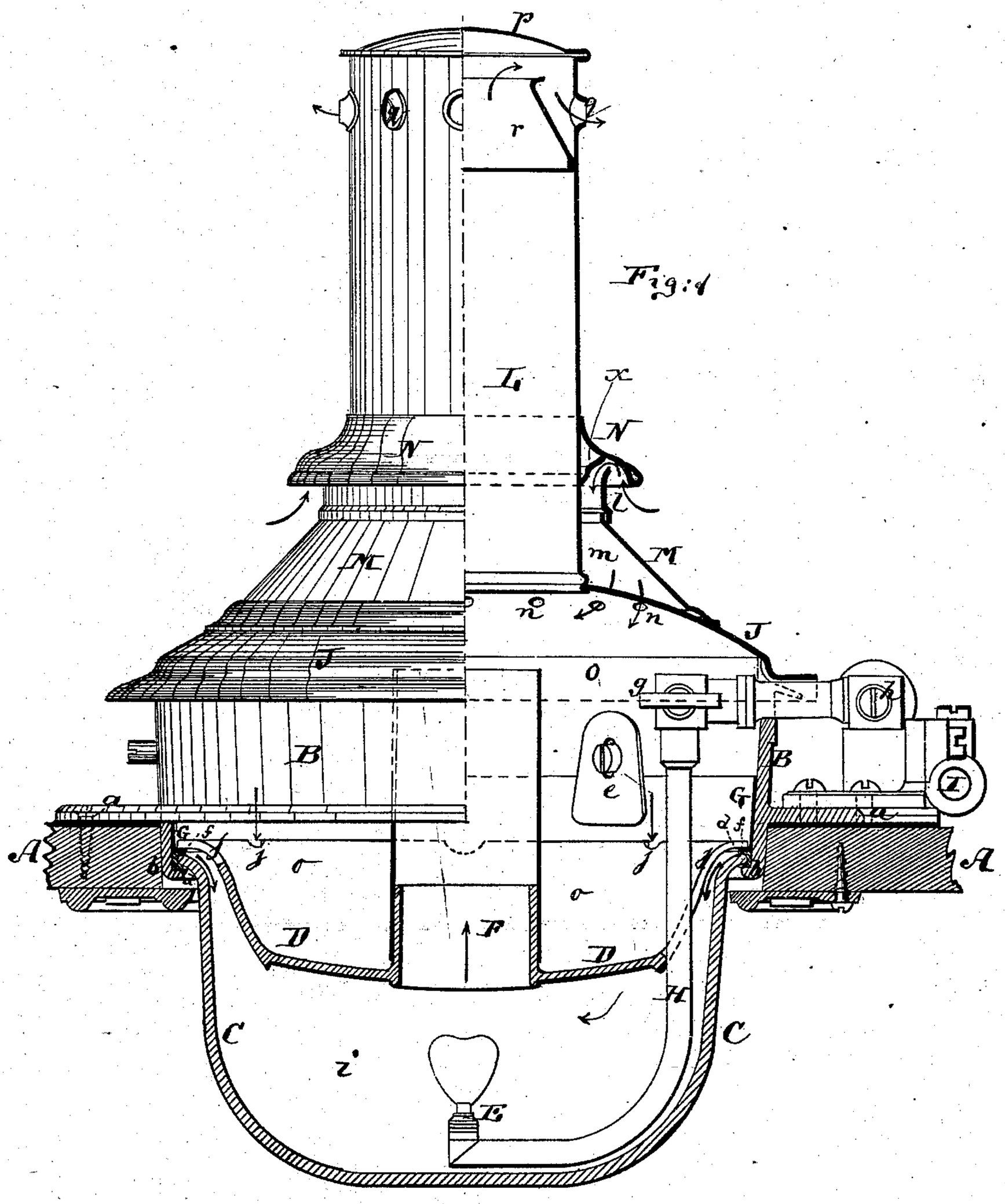

Fig: 1

Witnesses.
John C. Tunbridge.
Henry F. Parker.

Inventor:
Julius Pintsch
by his attorney
A. v. Briesen

(No Model.) 2 Sheets—Sheet 2.

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Fig: 2

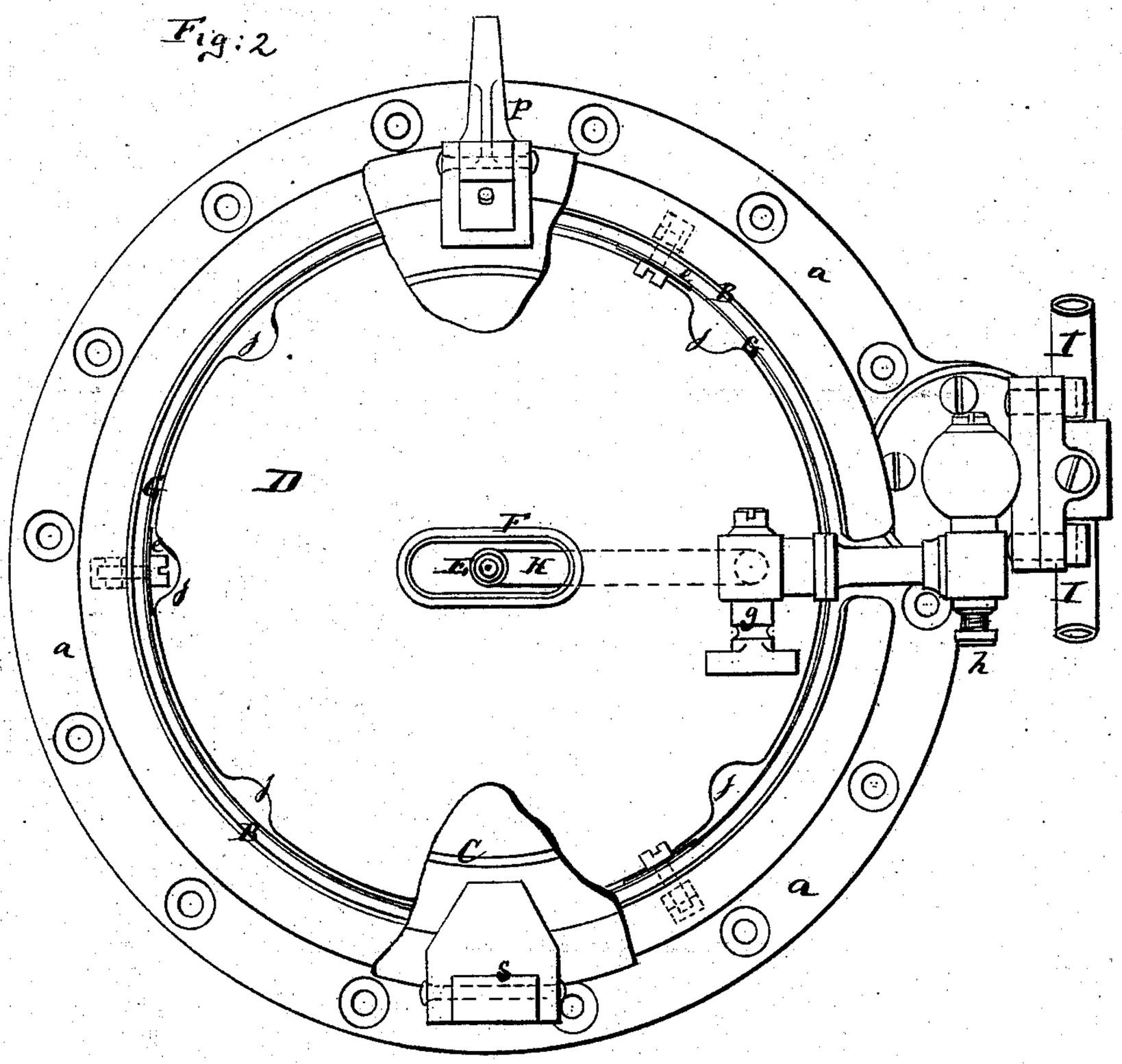
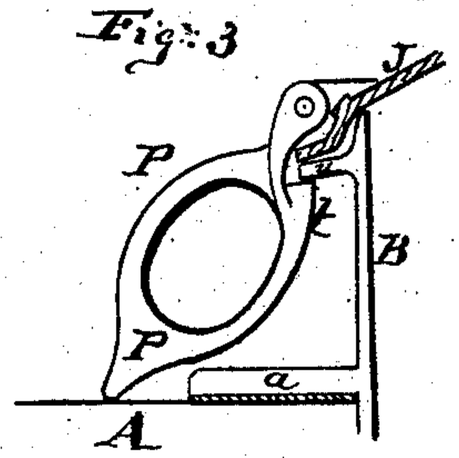


Fig: 3



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UNITED STATES PATENT OFFICE.

JULIUS PINTSCH, OF BERLIN, GERMANY.

LANTERN FOR RAILWAY-CARS AND OTHER VEHICLES.

SPECIFICATION forming part of Letters Patent No. 242,974, dated June 14, 1881.

Application filed April 2, 1881. (No model.) Patented in Germany July 3, 1877.

To all whom it may concern:

Be it known that I, JULIUS PINTSCH, of Berlin, Prussia, in the Empire of Germany, have invented a new and Improved Lantern for Railway-Cars and other Vehicles, (for which German Letters Patent, No. 1,798, were granted me July 3, 1877, for fifteen years,) of which the the following is a specification.

Figure 1 is a side view, partly in section, of my improved lantern. Fig. 2 is a top view thereof, showing the cap or cover partly broken away; and Fig. 3 is a detailed side view of the locking-latch.

This invention relates to a new lantern for illuminating railway-cars and other vehicles with illuminating-gas, and has for its object, first, to insure perfect reflection of the light into the body of the car; also, to prevent all disturbance of the light by gusts of wind or by the draft to which the moving vehicle may be exposed.

The invention consists of a new arrangement of the reflector, which is combined with an oval chimney and provided with draft-holes; also, with a new construction of parts through which the air reaches the flame and the products of combustion escape therefrom, and in other details of invention hereinafter more fully described.

The letter A in the drawings represents the roof of the car. Upon this roof is rigidly secured, by means of a projecting flange, *a*, the vertical cylinder B, which, below the flange *a*, has an inwardly-projecting lip, *b*, from which the glass bowl C, and, if desired, also the reflector D, are suspended, as shown. The upper and outer edge of the bowl C may be set into plaster-of-paris, as at *d*, or otherwise firmly fastened into the cylinder B. The reflector D is of cast or other metal or material, with its lower side enameled or otherwise made reflective and placed as near to the burner E as possible, and provided above said burner with a chimney, F, of oval form, as shown in Fig. 2. The lower face of the reflector may have short projections to rest it on a floor or support when taken out of the lantern. The long diameter of the oval is above the slit of the burner, so that the chimney will be but little larger than the flame and have a shape corresponding to that of the flame.

Instead of holding the reflector D directly on the inwardly-projecting lip of the cylinder B, I may secure within said cylinder an interior ring, G, having lugs *e*, through which the fastening-bolts are passed, and inwardly-projecting lip *f*, so as to suspend the edge of the reflector from said lip *f*, as shown.

The gas reaches the burner E through a pipe, H, which is provided with an ordinary gas-cock, *g*, and with a gas-regulating screw, *h*.

I is the main gas-supply pipe, of which H is a branch, said pipe I leading to the several lanterns in the same car or in a connected series of cars. The air for supplying the flame reaches the chamber *i* between the reflector and the bowl through holes or notches *j*, which are formed in or near the outer edge of the reflector.

The cylinder B is covered by a cap, J, from which springs a chimney, L. A truncated conical shield, M, embraces the lower part of the chimney L and is fastened upon the cap J, and above the shield M is a wind-guard, N, which overhangs the upper end of M, as shown, leaving an air-inlet, *l*, through which the air to be consumed enters the space *m*, between L and M, whence it escapes through holes *n* in the cap J into the chamber *o*, which is between said cap and the reflector.

x are ribs for bracing the guard N and giving direction to the currents of air that enter at *l*. Thus the air passes in the direction of the arrows (shown in the drawings) to the flame, and it will readily be seen that the wind has no opportunity of disturbing the flame, owing to the peculiar arrangement of the guard, shield, and passages provided for the current of air to the flame.

The oval chimney F is directly below the main discharge-chimney L, so that the products of combustion will ascend through F into L and escape through the upper part of the chimney L. The uppermost end of said chimney is covered by a cap, *p*, and has below said cap outwardly-extending discharge-openings *q*; but in line with said discharge-openings is fitted within said chimney L an inner conical outwardly-curved shield, *r*, which causes the products of combustion to escape in the manner indicated by the upper arrows, and prevents the wind from interfering with their proper discharge.

The cap J is shown to be hinged at *s*, Fig. 2, to the cylinder B, and has opposite to said hinge a locking-latch, P, which is more clearly shown in Fig. 3, and which, when down, as in said figure, brings its hook *t* under a projecting nose, *u*, of the cylinder B, while the upper part of the latch P is above the edge of the cap J, as shown in Fig. 3. Thus the accidental opening of the cap is prevented, and the attendant on the roof of the car is obliged, before he can open the cap, to insert his fingers into the ring-shaped handle of the latch P to lift the same, whereupon he can turn the cap J back, and expose the upper surface of the reflector to view, enabling him to reach the burner with a match or other lighting apparatus; but instead of hinging the cap J in the manner shown and opening the lantern from above, it will be equally convenient to hinge the glass bowl C, so as to permit the lantern to be lighted or extinguished from within the car, which in many instances will be more convenient.

Two or more burners may be placed in the same lantern, and in that case the reflector requires two pieces, F, one above each burner.

I claim—

1. In a lantern containing a gas-burner, E, and gas-supply pipe H, the combination of the lower transparent bowl, C, with the reflector D, having chimney-piece F and air-openings *j*, all arranged so that the air above the reflector D shall have free access to the entire chamber formed by the bowl C, substantially as herein shown and described.

2. The combination, in a lantern, of the cap J, having apertures *n*, with the shield M, wind-guard N, forming covered air-passage *l*, and with the reflector D, having air-openings *j* and chimney F, substantially as herein shown and described.

3. The combination of the cap J, having apertures *n*, with the shield M, guard N, and chimney L, having inner shield, *r*, cover *p*, and outlet-openings *q*, substantially as herein shown and described.

4. The combination of the hinged cap J with the cylinder B, having nose *u*, and with the ring-shaped latch P, having hook *t*, and arranged to reach to the roof A of the car when locked, substantially as described.

JULIUS PINTSCH.

Witnesses:
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