

(No Model.)

A. R. CAVNER, Dec'd.

E. E. HOLMAN, Administrator.

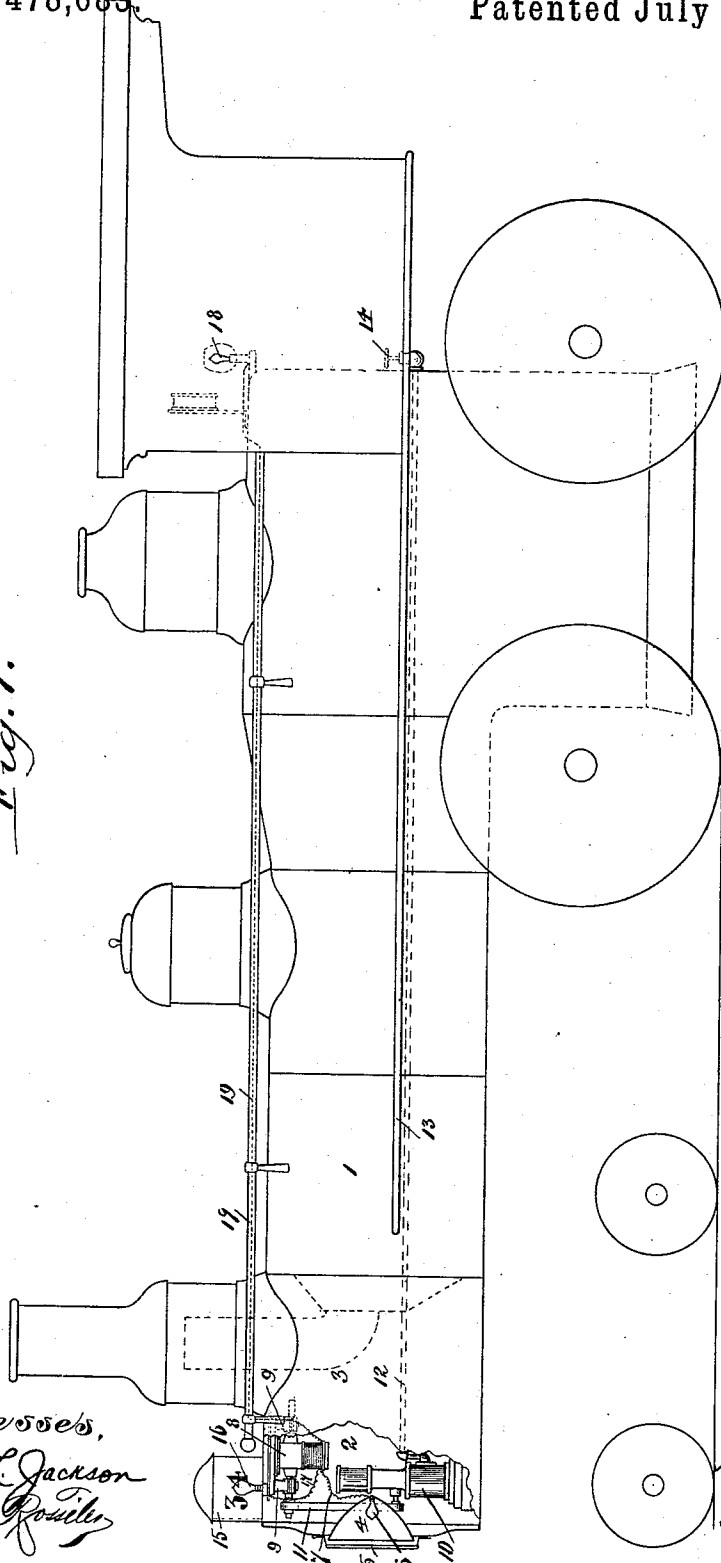
APPARATUS FOR LIGHTING LOCOMOTIVE ENGINES.

No. 478,683.

Patented July 12, 1892.

Fig. 1.

Witnesses,
John L. Jackson
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UNITED STATES PATENT OFFICE.

ALEXANDER R. CAVNER, OF CHICAGO, ILLINOIS; EDWARD E. HOLMAN, ADMINISTRATOR OF SAID ALEXANDER R. CAVNER, DECEASED, ASSIGNOR TO THE CAVNER LOCOMOTIVE IMPROVEMENT COMPANY, OF SAME PLACE.

APPARATUS FOR LIGHTING LOCOMOTIVE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 478,683, dated July 12, 1892.

Application filed August 1, 1891. Serial No. 401,434. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER R. CAVNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and Improved Apparatus for Lighting Locomotive-Engines, of which the following is a specification, reference being had to the accompanying drawing, in which the figure is a side elevation of a portion of a locomotive, a portion of the front end of the locomotive being broken away to show the arrangement of my improved apparatus.

The principal object of my invention is to provide improved apparatus for furnishing light for the head-light and for the interior of the cab of a locomotive.

Another object of my invention is to provide means whereby the number of the locomotive and the road to which it belongs may be easily ascertained in the night-time.

I accomplish these objects as hereinafter specified and as illustrated in the drawing.

That which I regard as new will be pointed out in the claim.

In the drawing, 1 indicates a locomotive, which is provided with the forward compartment 2 at the front of the boiler, which is common to locomotives as now built. The front compartment 2 is preferably separated from the flues of the boiler by a partition 3, (indicated by dotted lines in the drawing,) so that none of the smoke and gases from the boiler will pass into the forward portion of the compartment 2.

4 indicates a reflector, which is centrally secured in the front end of the compartment 2 in such position that it will be adapted to throw light in front of the locomotive. The reflector 4 is preferably of the usual parabolic form and is provided with a glass front 5, which is hinged to it in any suitable manner, so that it may be opened to permit of access to the interior of the reflector.

6 indicates an incandescent lamp, which is secured inside the reflector 4 at such a point that the greatest amount of light will be reflected from it. When a parabolic reflector is used, the lamp 6 is placed at the focus.

7 indicates wires, which are preferably

wound together, as shown in the drawing, and are adapted to conduct a current of electricity from a dynamo 8 to the lamp 6. The dynamo 8 is of any suitable construction and is carried in the compartment 2, being preferably supported from the top of said compartment by brackets 9, as shown. The dynamo 8 is operated from a steam-engine 10, which is of such size that it may be placed in the compartment 2.

11 indicates a belt by means of which the dynamo is driven from the engine 10, as shown. Steam is supplied to the engine 10 through a pipe 12, which extends from the compartment 2 back to the boiler of the locomotive, preferably passing under the running-board 13 at one side of the locomotive, as shown. A valve 14 is placed in the cab, by means of which the supply of steam to the engine 10 may be governed from the cab.

15 indicates a glass box, which is secured upon the top of the front end of the locomotive. Inside the box 15 is secured an incandescent lamp 16, which is connected by means of wires 17 to the dynamo 8, as shown. Upon the sides of the box 15 are placed the number of the locomotive and the initials of the railway company to which it belongs, so that when the lamp 16 is lighted the number of the locomotive and its company may be easily ascertained at night.

17 indicates ordinary hand-rails, one of which is placed at each side of locomotives as now built.

18 indicates an incandescent lamp, which is mounted in the front portion of the cab of the locomotive in position to illuminate the interior of the cab. The lamp 18 is supplied with a current of electricity from the dynamo 8 through wires 19, which pass from the dynamo 8 through the hand-rails 17 to the lamp 18. By passing the wires 19 through the rails 17 they are protected and do not detract from the appearance of the locomotive.

If desired, switches may be placed upon the wires 7, 17, and 19, so that the different lamps may be cut out at pleasure; but as it is usually desirable to have all the lamps burning at night-time it is not essential that the switches should be used.

By opening the valve 14 and admitting steam from the boiler to the engine 10 the dynamo will be set in motion and the lamps will be lighted.

5 If desired, wires may be provided to supply a current to lamps in a train of cars, to a rear head-light on the locomotive, or to other desired points.

That which I claim as new, and desire to secure by Letters Patent, is—

10 In a locomotive-engine, the combination,

with a boiler having a compartment at its forward end, of a reflector secured in the front of said compartment, an electric lamp mounted in said reflector, and mechanism adapted to furnish a current of electricity to said lamp, substantially as and for the purpose specified. 15

ALEXANDER R. CAVNER.

Witnesses:

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