

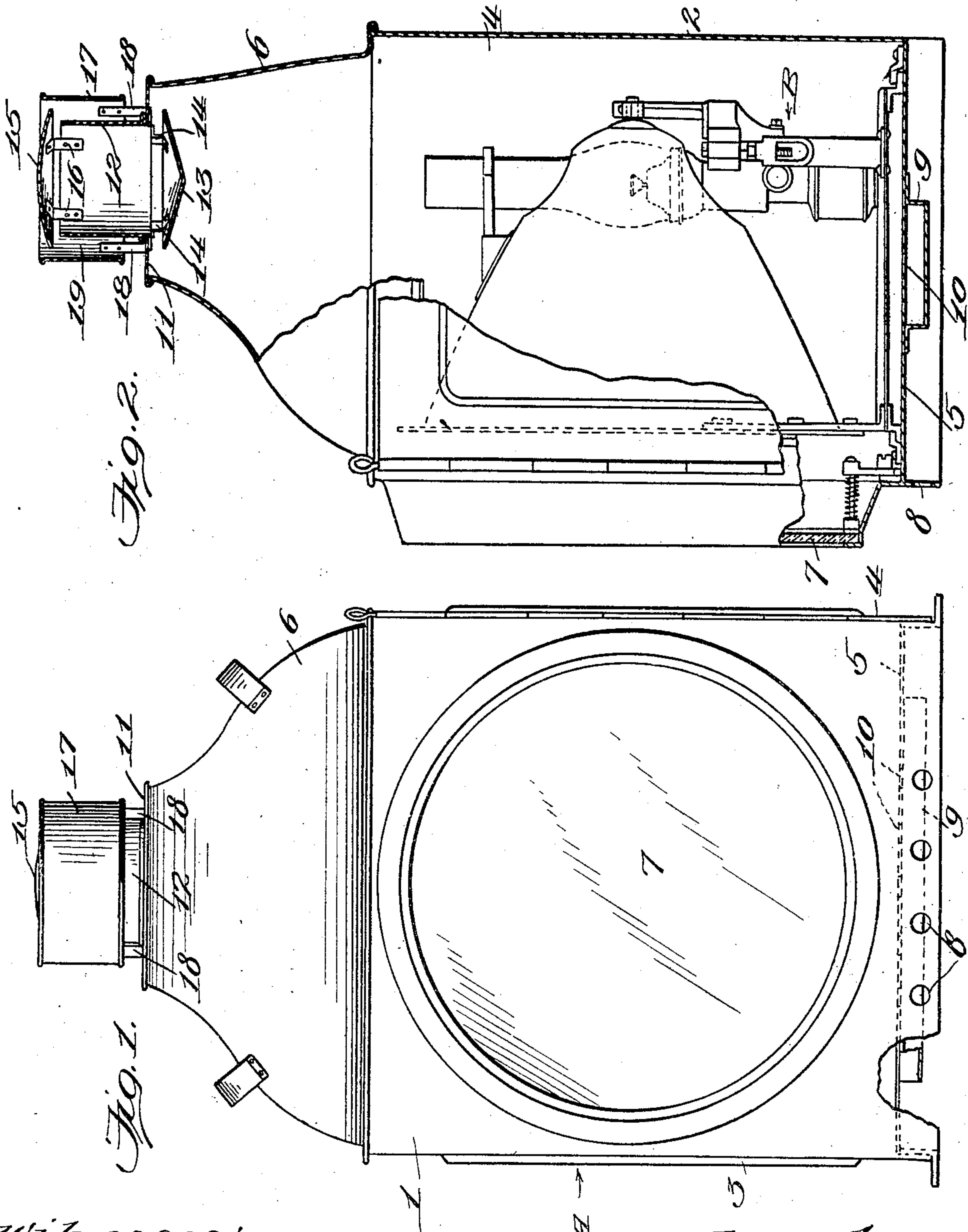
J. LAWLER.
LAMP CASING.

APPLICATION FILED SEPT. 28, 1909.

960,179.

Patented May 31, 1910.

2 SHEETS—SHEET 1.



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By
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2 SHEETS—SHEET 2.

Fig. 3.

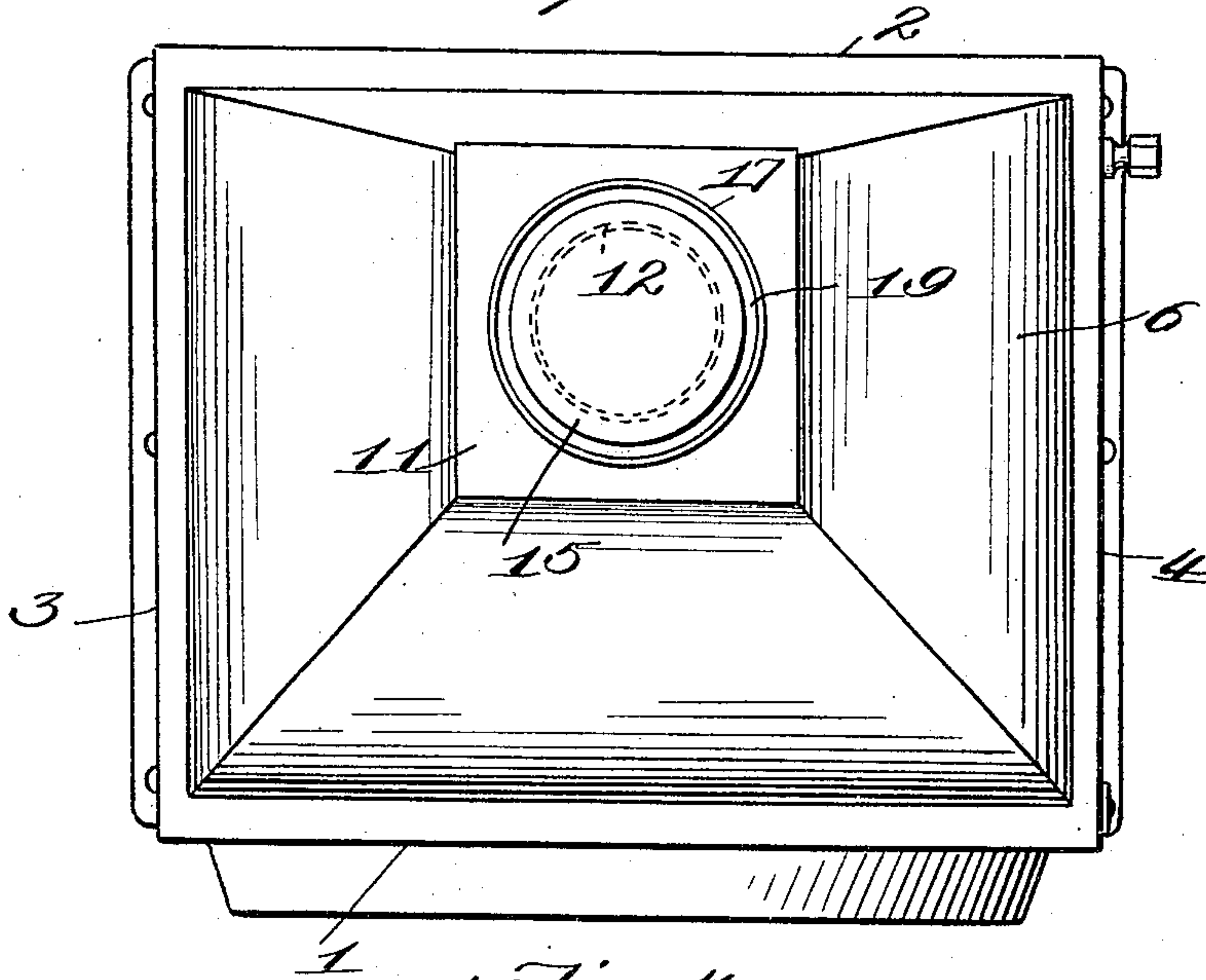
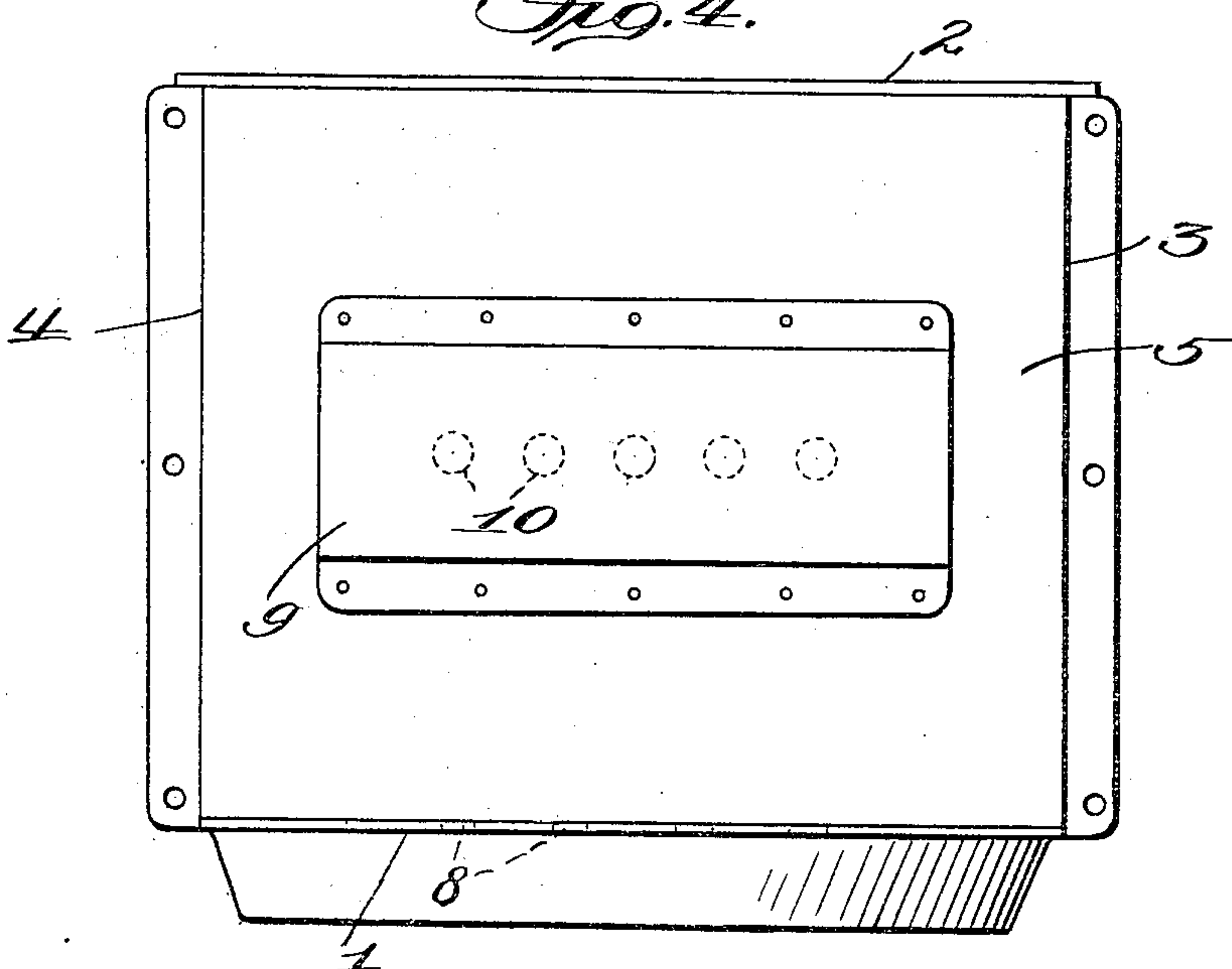


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN LAWLER, OF CLINTON, IOWA, ASSIGNOR OF ONE-HALF TO FRANK G. BENJAMINE,
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LAMP-CASING.

960,179.

Specification of Letters Patent.

Patented May 31, 1910.

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To all whom it may concern:

Be it known that I, JOHN LAWLER, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented new and useful Improvements in Lamp-Casings, of which the following is a specification.

The present invention is an improvement in lamp casings, and its object, broadly stated, comprehends the production of an article of the type specified, designed primarily for use in connection with a lamp as a locomotive headlight, and so constructed as to supply under all circumstances the proper amount of air for perfect combustion, to dispose of the products of soot upon the lens and reflector, and, generally, to prevent the flame from being affected by wind or storm, or when the train is in motion.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a front elevation of a locomotive headlight constructed in accordance with the present invention. Fig. 2 is a side elevation thereof, parts of the casing being broken away. Figs. 3 and 4 are top and bottom plan views respectively of the headlight.

Reference being had to said drawings, and to the characters marked thereon, A indicates in a general manner the casing of the headlight, and B the lamp. The last element may be of any preferred or conventional type, and since it forms no part of the present invention, detailed description thereof will be omitted.

The casing A includes front and rear members 1 and 2, sides 3 and 4, a flat bottom 5, and a dome-like top or cap 6. The front member 1 has inserted therein the lens 7 which also may have any preferred construction. The rear member 2 terminates at its lower edge flush with the bottom of the casing, while the front and side members project below said bottom, the projecting portion of the front member having a horizontal series of openings 8 formed therein. This feature is clearly shown in Figs. 1 and 2. To the bottom member there is secured a transversely-arranged trough-like shield 9, the ends of which are open, the shield being disposed

directly beneath a correspondingly arranged row of openings 10 formed in said member. The openings last referred to form the sole means for the admission of air into the casing, and it will be apparent that air can be supplied to said openings only through the open ends of the shield; consequently there is virtually no direct draft into the casing.

The dome has a flat upper portion 11 formed with a circular opening in which is fitted the lower end of a cylindrical sleeve or tube 12 designed to serve as a flue. There is also secured to the portion 11, interiorly of the dome an inverted conical deflector 13, the attachment of which to said portion is effected by means of depending straps 14. The diameter of this deflector is greater than that of the tube, and the peripheral edge of said deflector is arranged an appreciable distance below the tube end. A second deflector 15, of more or less conical shape, is also employed in conjunction with the tube, it being located slightly above the upper end of the latter and attached thereto by straps 16. Finally, the tube is surrounded by a second tube 17 located exteriorly of the casing dome and having its lower edge elevated above the flat portion 11, to which portion said tube is connected by straps 18. The upper edge of the outer tube extends above that of the inner tube, as shown, and the difference between the diameters of the two tubes is sufficiently great to result in the formation of an annular draft passage or throat 19, the peripheral edge of the upper deflector projecting into said passage or throat.

From the foregoing, it will be apparent that lamp is shielded against direct drafts both from above and from below. Air can enter the casing through the openings 10 by way of the trough 9 only, which trough is disposed transversely of the casing and, in consequence, of the line or lines of entrance, and the lamp is located rearwardly of said openings. Under normal conditions any direct draft entering the casing from above is broken up by the lower deflector, while when the train is traveling against the wind, or through a storm, the light remains unaffected by reason of the employment of the upper deflector and of the outer tube, this being also the case when the train is traveling at a high rate

of speed. In the last-mentioned instance, the formation of the throat or passage 19 will have the effect of inducing an upward draft from the casing through the inner tube, thereby expelling the products of combustion.

What is claimed is:

1. The combination, with a casing; of a cap located at the top of the casing and comprising a flue opening thereinto, a pair of deflectors connected to the ends of the flue and arranged exteriorly and interiorly of the casing, and means associated with the flue for inducing a positive upward draft therethrough from said casing.

2. The combination, with a casing; of a cap located at the top of the casing and comprising a flue opening thereinto, a tube surrounding the flue and open at both ends to the atmosphere for inducing a positive upward draft through said flue, and a deflector connected to one edge of said flue and extending at its periphery toward the wall of said tube.

3. A lamp casing having a dome provided with an opening; a flue fitted at one end in said opening; a deflector connected to each end of the flue; and an annular member connected to the dome and surrounding the flue, to induce a direct draft through said flue from the casing.

4. A lamp casing having a dome provided with a flat top portion formed with an opening; a flue having its lower end fitted

in said opening; and an open-ended tube surrounding the flue and arranged in spaced relation thereto, said tube having its upper end projecting above that of the flue, and its lower end elevated above said flat portion.

5. A lamp casing having a perforated bottom, and a shield secured to said bottom directly beneath the perforations therein, the ends of said shield terminating short of the corresponding edges of said bottom and being open to supply air therethrough to said perforations.

6. A lamp casing having a perforated bottom, and an open-ended trough secured to said bottom directly beneath the perforations therein, for supplying air to said perforations, the ends of said trough terminating short of the corresponding edges of said bottom.

7. A lamp casing having a transversely arranged row of openings formed in its bottom, and a transversely arranged shield secured to said bottom directly beneath said openings, the ends of the shield being open to supply air therethrough to the openings.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN LAWLER.

Witnesses:

JOHN G. HARING,
OTTO P. H. MILLER.