

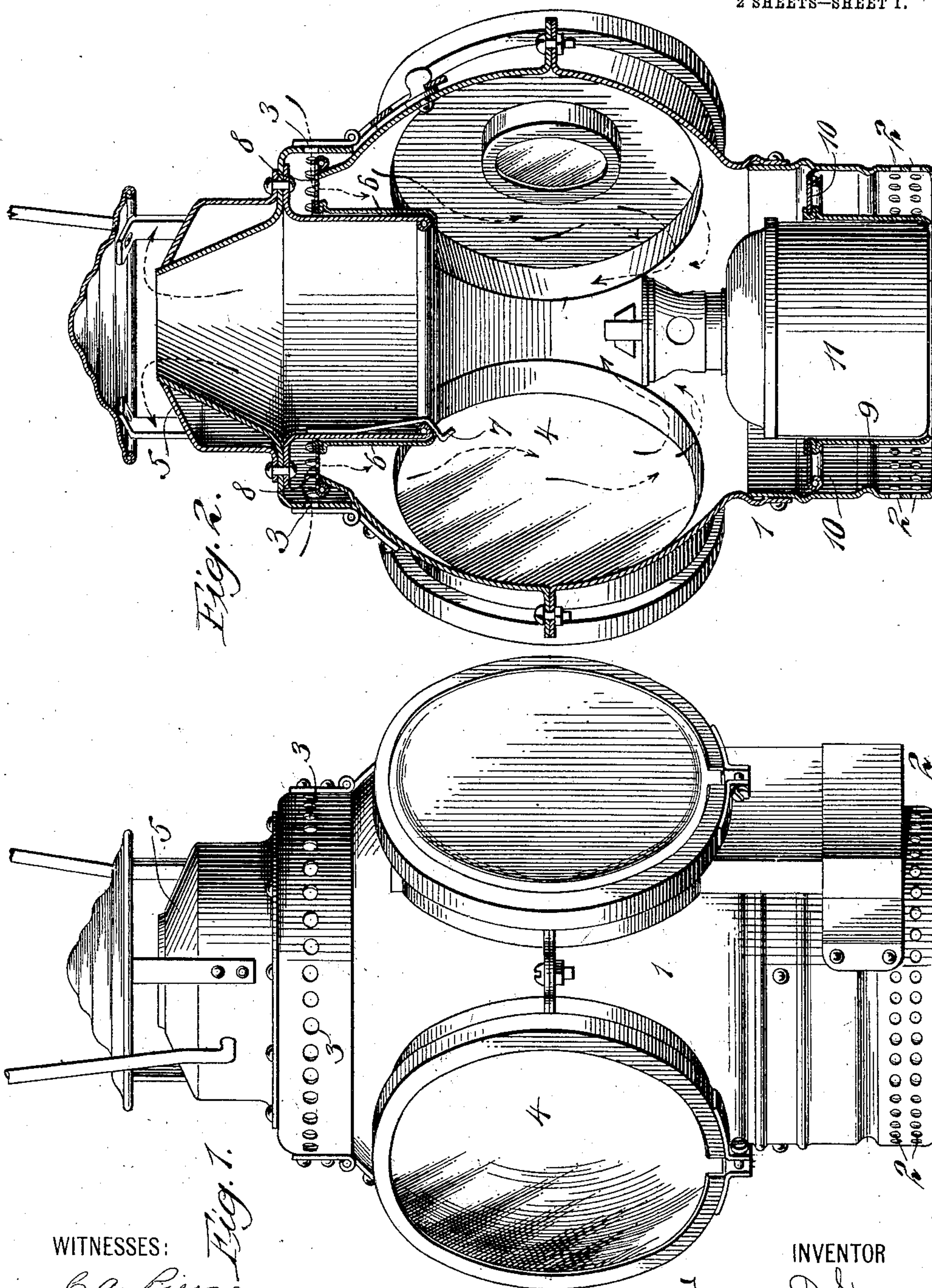
No. 840,025.

PATENTED JAN. 1, 1907..

F. D. SPEAR.
SIGNAL LAMP.

APPLICATION FILED APR. 8, 1904. RENEWED NOV. 26, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

B. A. Pierce
Cornelia Storey.

INVENTOR

Freeman D. Spear.

BY A. M. Pierce.

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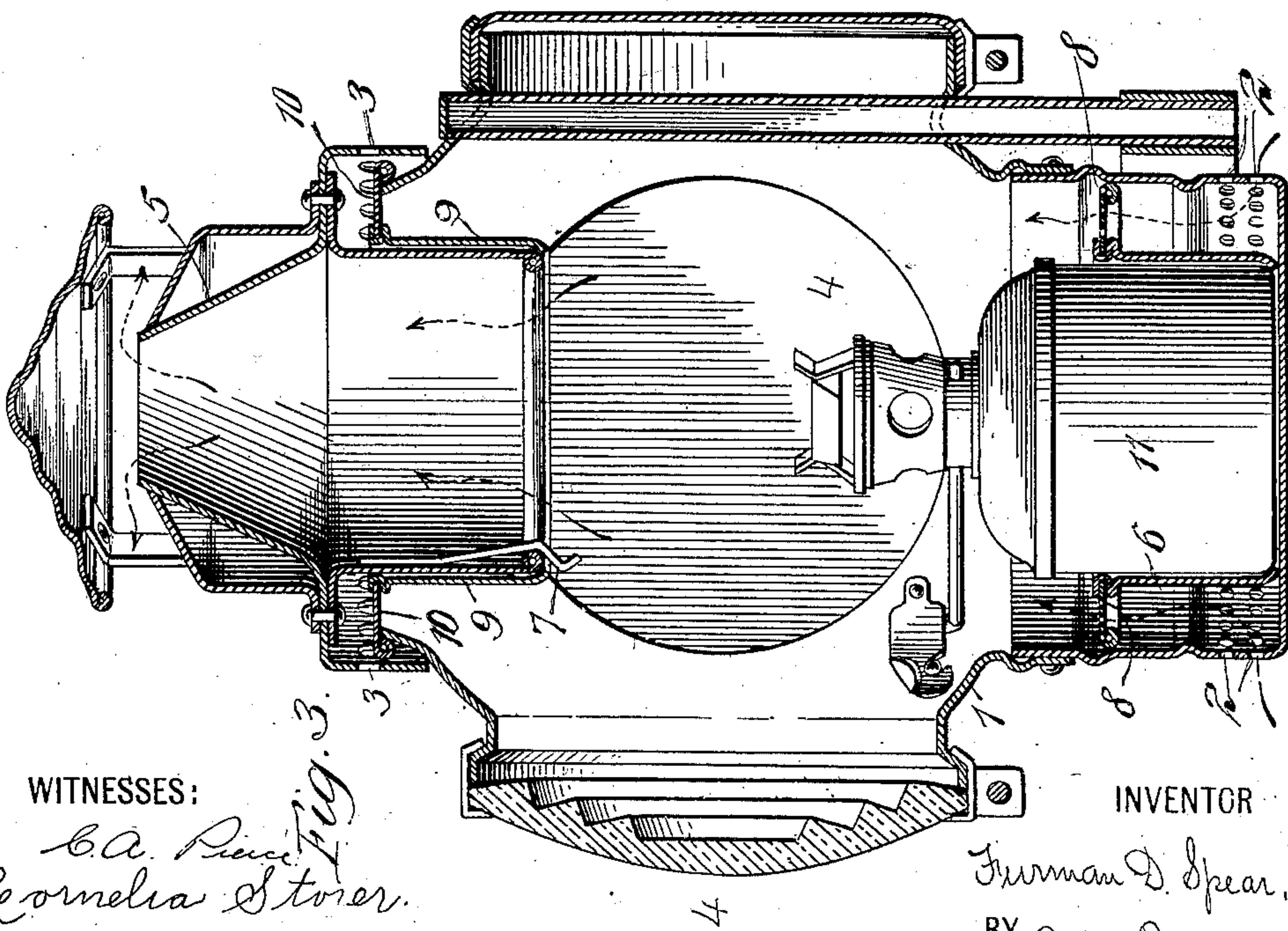
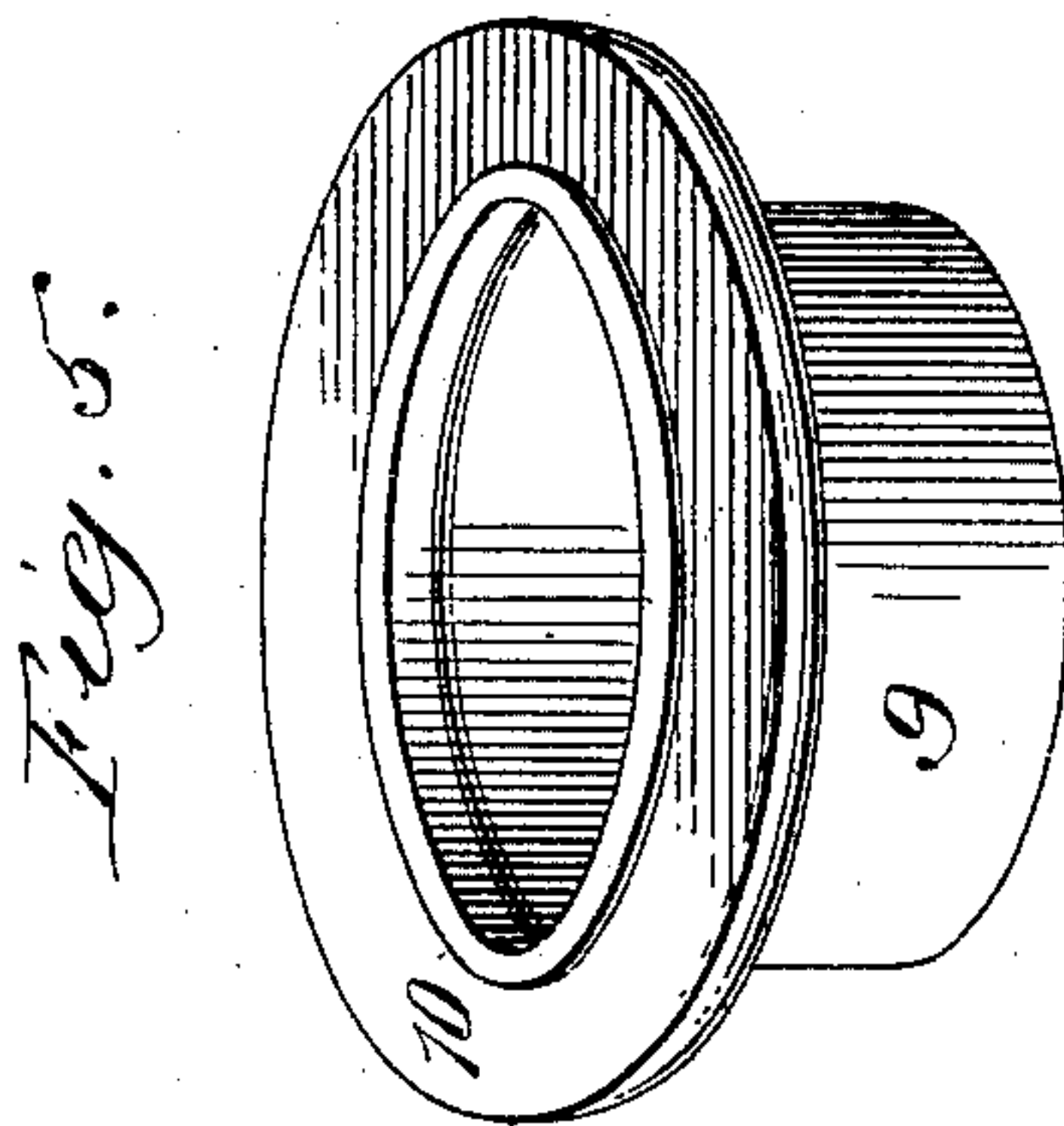
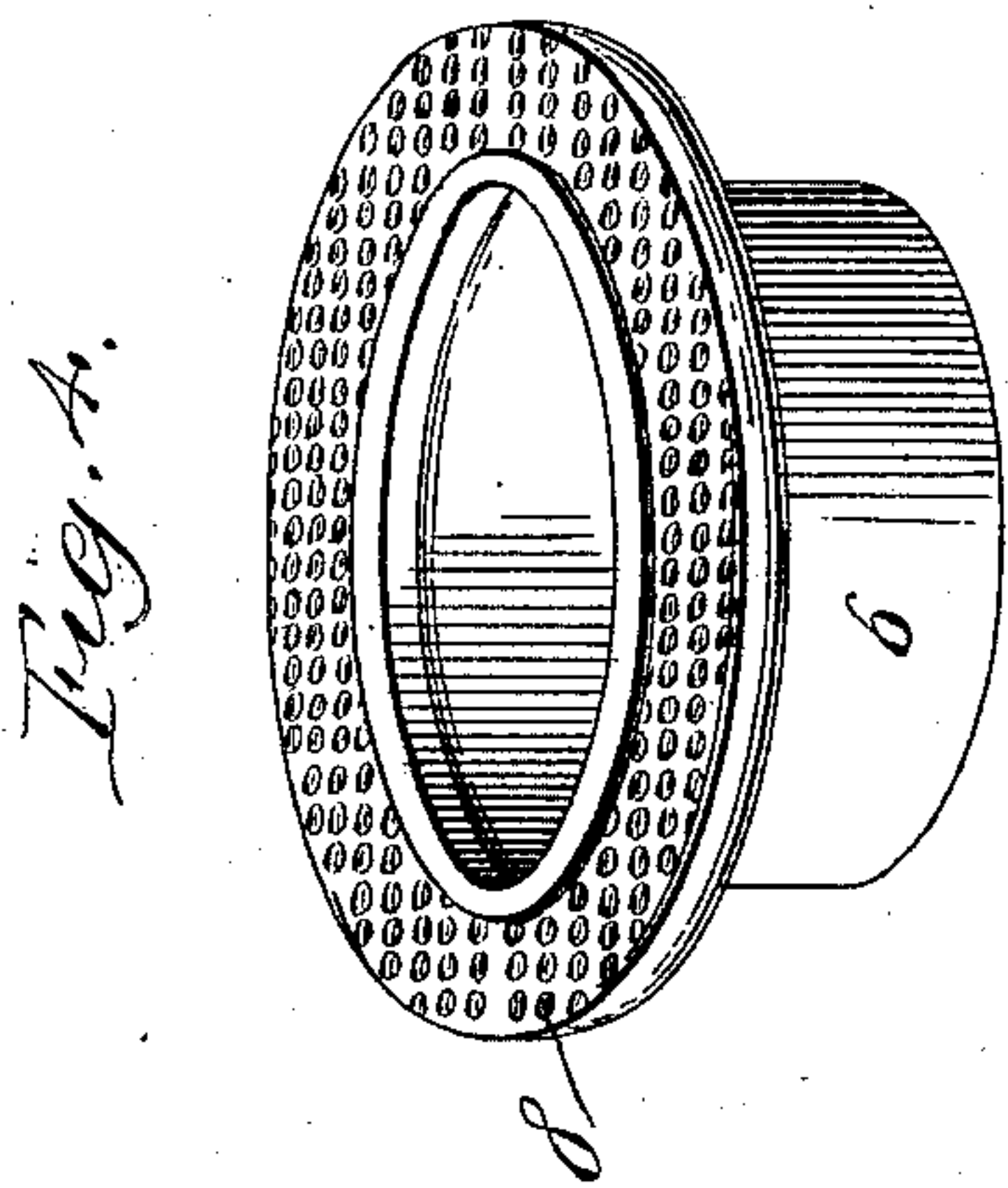
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WITNESSES:

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UNITED STATES PATENT OFFICE.

FURMAN D. SPEAR, OF BROOKLYN, NEW YORK, ASSIGNOR TO ARMSPEAR
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SIGNAL-LAMP.

No. 840,025.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed April 8, 1904. Renewed November 26, 1906. Serial No. 345,176.

To all whom it may concern:

Be it known that I, FURMAN D. SPEAR, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Signal-Lamps, of which the following is a specification.

My invention relates especially to that class of lamps used upon railroads, and has for its object the provision of a signal-lamp wherein provision is made for proper ventilation under varying conditions—that is, the regulation of the supply of air to support combustion of the lamp-flame in such manner as to prevent the gathering of moisture upon the lenses of the lamp-body when the temperature of the atmosphere is low, and also prevent overheating of the oil-pot and consequent danger of burning up of the lamp when the temperature of the atmosphere is high.

To attain the desired end, my invention consists, essentially, in the combination, with a lamp-body provided with air-passages in proximity to the top and bottom thereof, of means for closing or obstructing either of said passages; and my invention also involves certain novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described and then pointed out in the claim.

In the accompanying drawings forming a part hereof, Figure 1 is a perspective view of a signal-lamp embodying my invention. Fig. 2 is a vertical axial sectional view thereof, showing the reversible casings in place within the body of the lamp; and Fig. 3 is a like view with the casings reversed from the position shown in Fig. 2. Figs. 4 and 5 are perspective views of the reversible casings removed from the lamp-body.

Similar numerals of reference wherever they occur indicate corresponding parts in all the figures.

Experience has demonstrated that at different periods of the year or in extremes of temperature from any cause air to support combustion should be taken into a lamp-body of the character of that to which my invention is applied at different locations with reference to the lamp-burner in order to attain the best results. When the weather is cold, the air-supply is best when taken from above

the flame and drawn downward from near the top of the lamp-body. The result of such ventilation is to dry the air and prevent a deposit of moisture upon the lenses, the outer surfaces whereof are exposed to the cold atmosphere and consequent diminution of the light transmitted, as is the case when air to support combustion under these conditions is supplied from near the bottom of the lamp-body. In warm or hot weather this difficulty does not arise; but another presents itself. If air to support combustion be supplied as above described, there is danger of overheating of the oil-pot and contained oil, with consequent fire and injury or destruction of the lamp. Therefore at such seasons or under such conditions of temperature of the atmosphere air to support combustion should be taken into the lamp-body near the bottom thereof and pass over the oil pot before reaching the burner. Under certain conditions it may be found effective to permit an unobstructed flow of air at the base of the lamp-body to the interior thereof, allowing the openings at the top to remain unobstructed at the same time.

To meet the above requirements, I have provided a lamp-body having air-passages at both top and bottom and wherein are reversibly and interchangeably mounted casings, one of said casings being provided with a perforated flange, the flange of the other being imperforate, as will be readily understood by reference to Figs. 4 and 5 of the drawings. I have shown herein a construction well adapted to the form of signal-lamp illustrated; but other mechanical constructions may be employed for producing the desired results without departing from the spirit of my invention.

1 is the body of a lamp, made of any approved material or of any approved shape and having air-passages 2 and 3 located in proximity to the top and bottom of such body, respectively.

4 represents lenses.

11 is the oil-pot.

5 is the outlet for products of combustion.

6 is a reversible casing, which may be held at the top of the lamp-body by a spring 7 or the equivalent. The flange 8 of the casing 6 is perforated for the passage of air.

9 is a casing similar in all respects to the casing 6, but provided with an imperforate

flange 10. These casings may be instantly
interchanged and reversed in position by
simply opening the lamp-body and remov-
ing the oil-pot, either casing forming a seat
5 therefor.

When the parts are in the position shown
in Fig. 2 of the drawings, the lower air-inlets
2 are closed or obstructed, and air to support
combustion is admitted through the upper
10 openings 3, reaching the interior of the lamp-
body through the perforations in the flange
8, the signal-lamp being in proper condition
for use during cold weather. In Fig. 3 the
casings 6 and 9 are reversed in position, and
15 air is admitted through the openings 2, ad-
mission of air at the top of the lamp-body be-
ing obstructed and prevented by the imper-
forate flange 10 of the casing 9, the lamp be-
ing in condition for use in warm weather.

Having now fully described my invention, 20
what I claim as new therein, and desire to se-
cure by Letters Patent, is—

The combination with a lamp-body pro-
vided with air-passages in proximity to the
top and bottom thereof, of a casing mounted 25
in the top of the lamp-body having its flange
perforated, and a corresponding casing in the
bottom of the lamp-body provided with an
imperforate flange, said casings being inter-
changeable. 30

Signed at New York, in the county of New
York and State of New York, this 6th day of
April, A. D. 1904.

FURMAN D. SPEAR.

Witnesses:

J. STANTON,
WM. S. ARMOUR.