

T. S. LEESE.
AIR BAFFLER FOR LAMPS.
APPLICATION FILED JAN. 19, 1905.

Fig. 1.

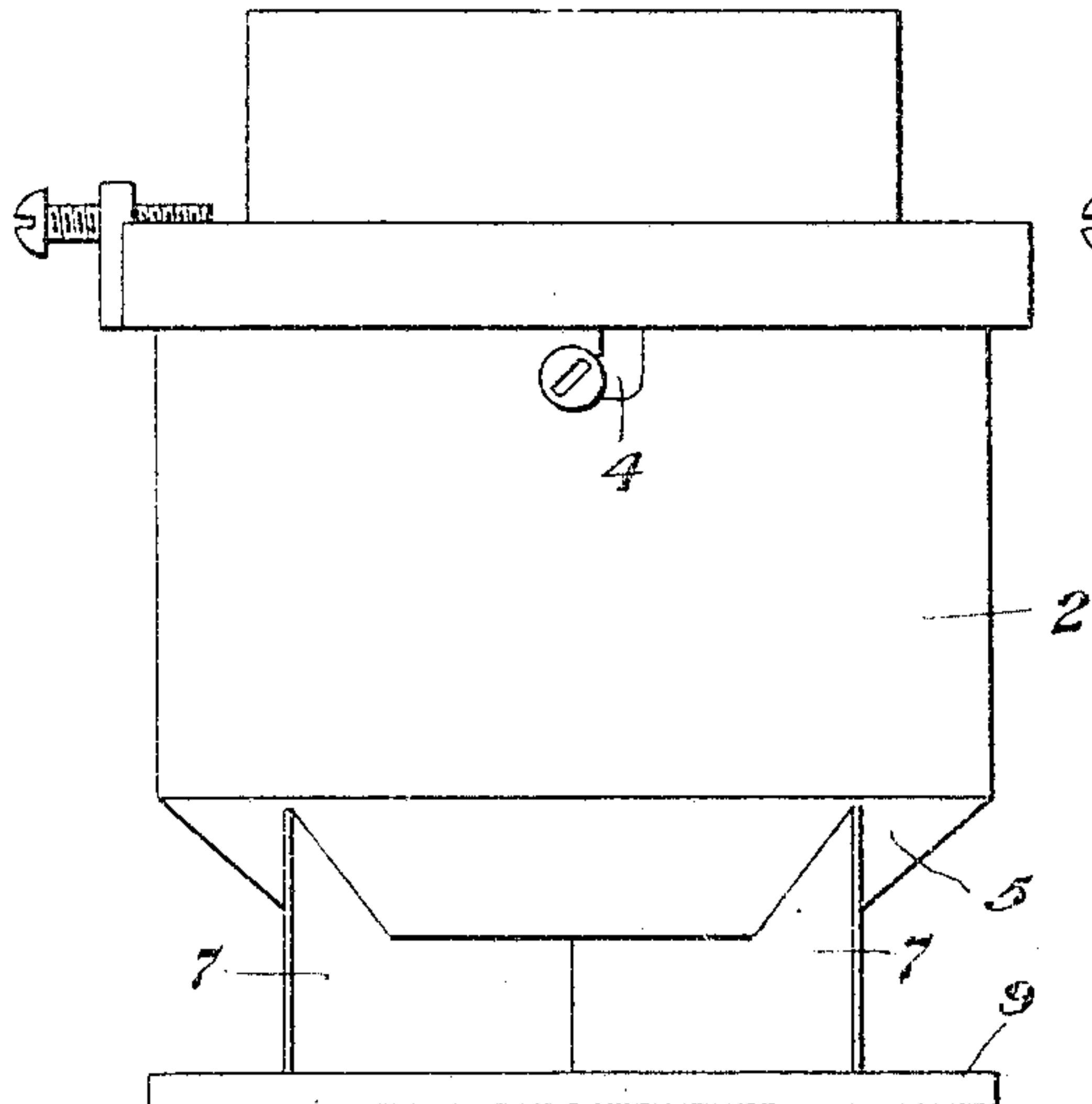


Fig. 2.

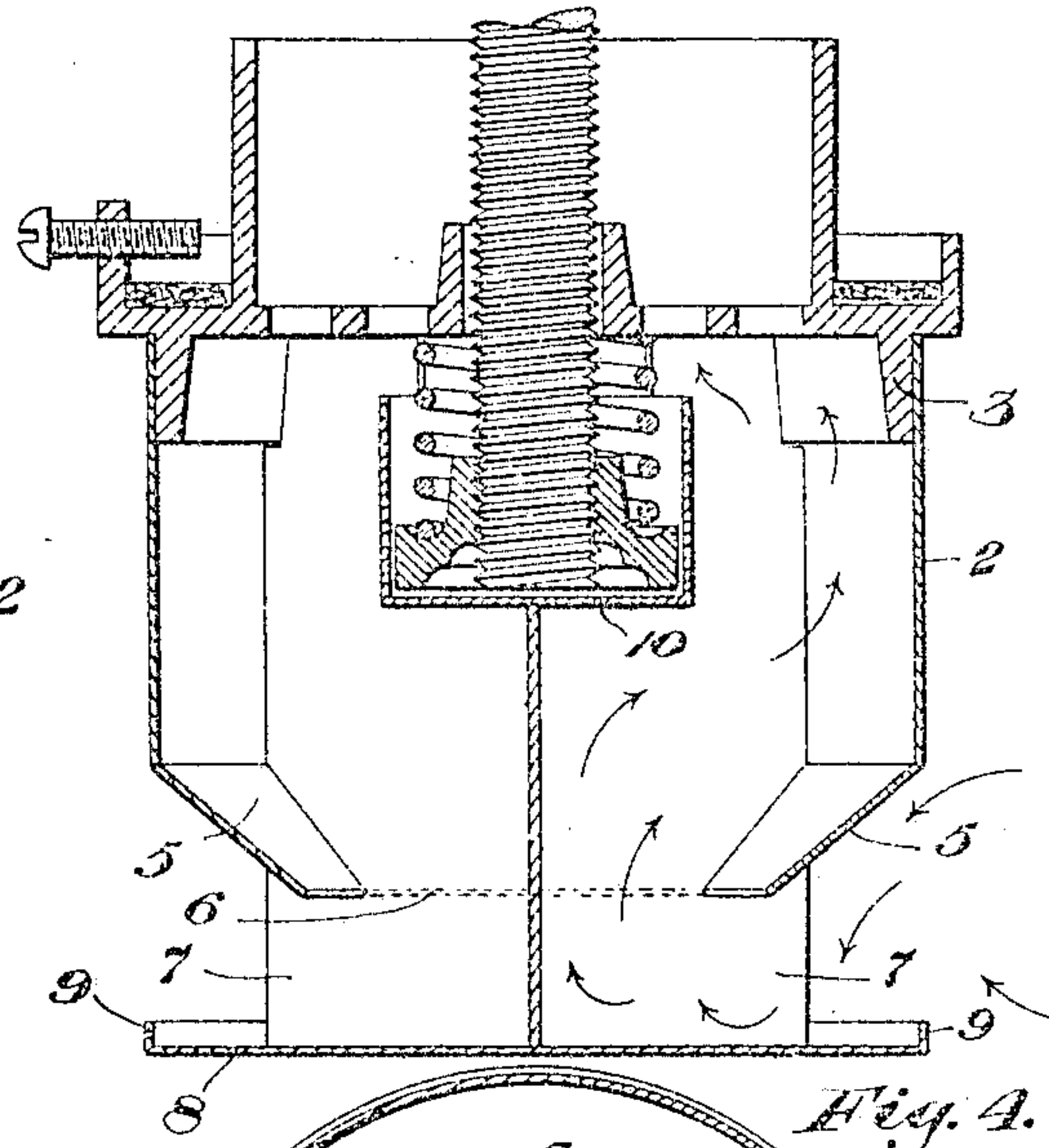


Fig. 3.

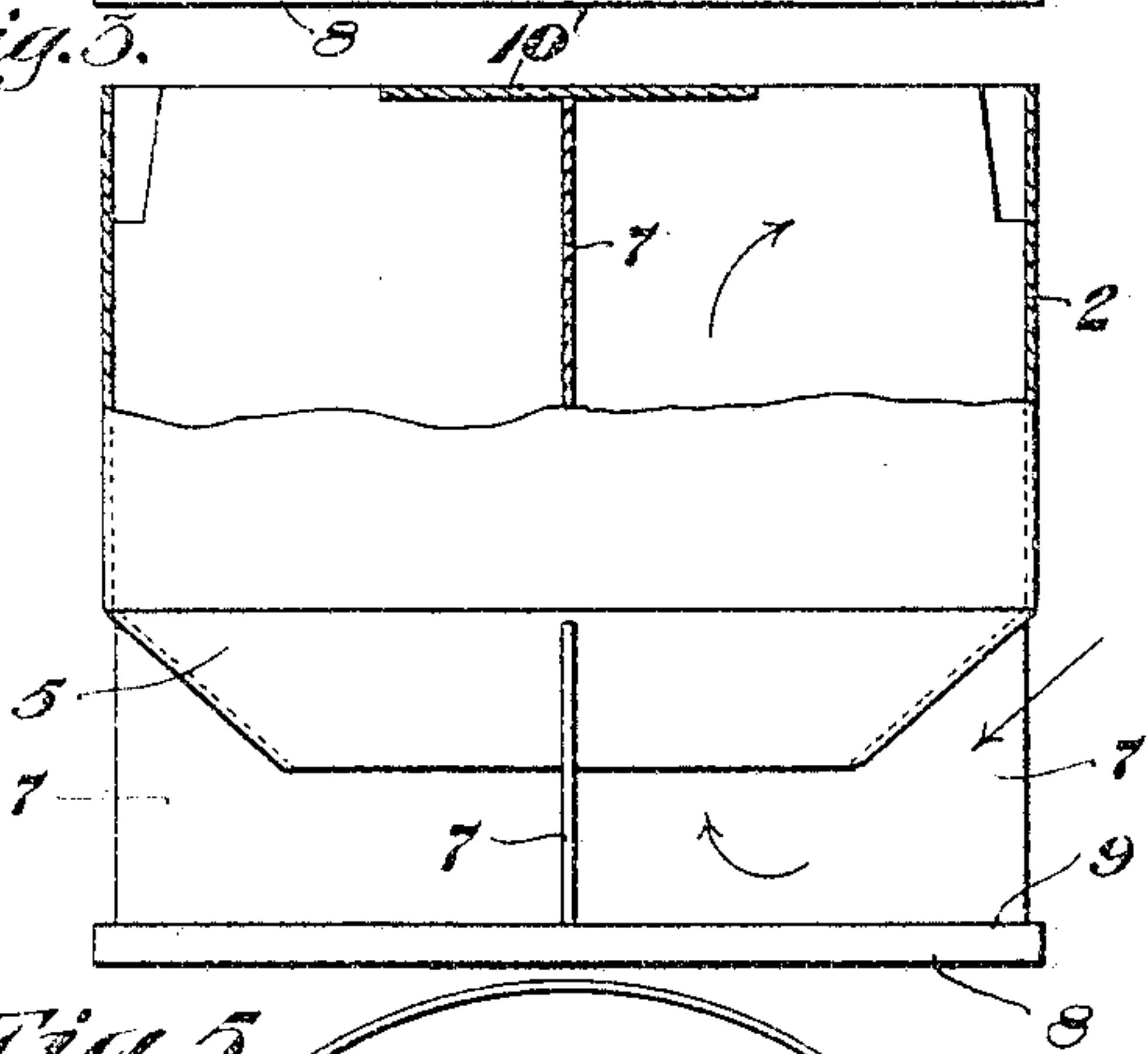


Fig. 4.

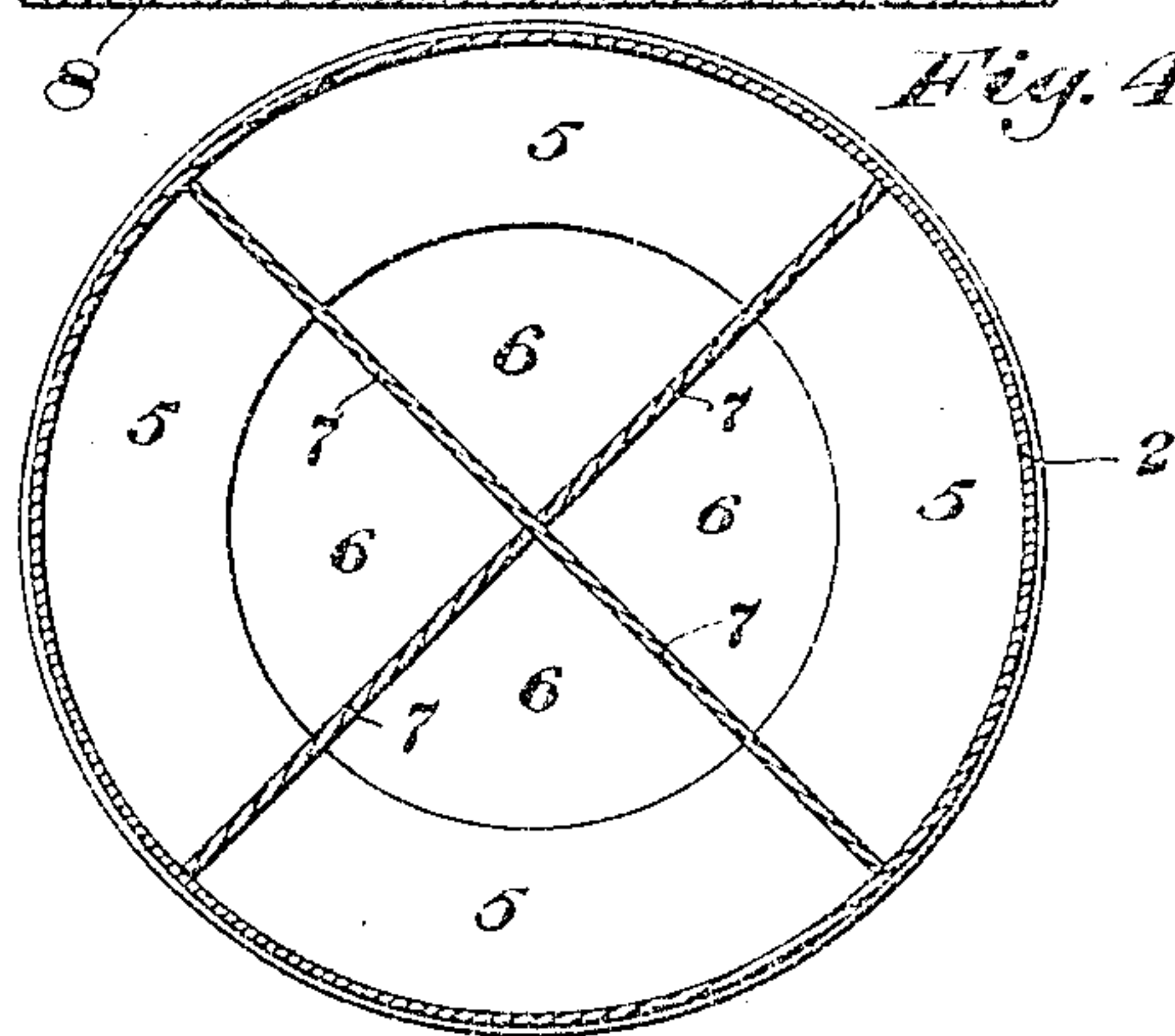


Fig. 5.

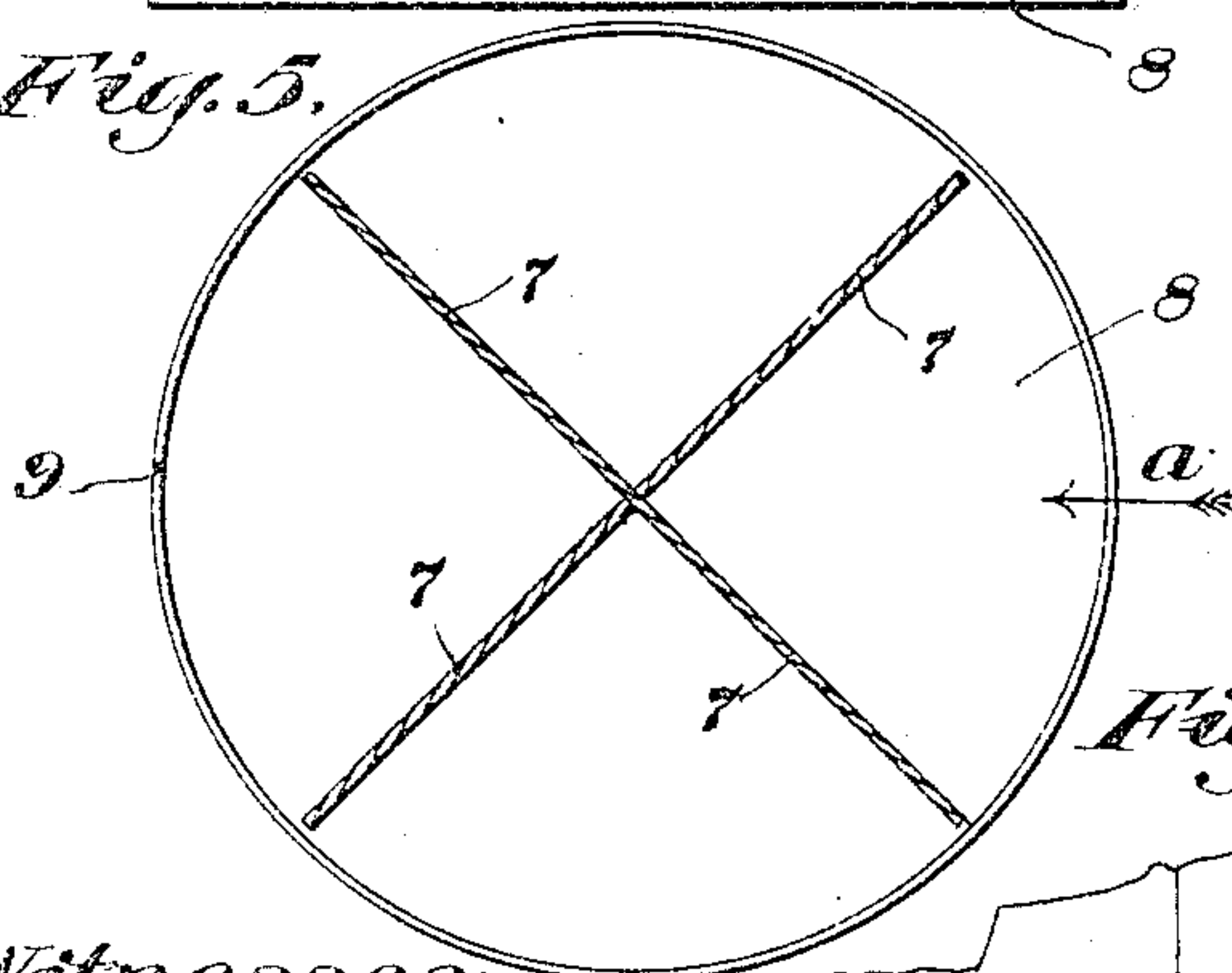


Fig. 6.

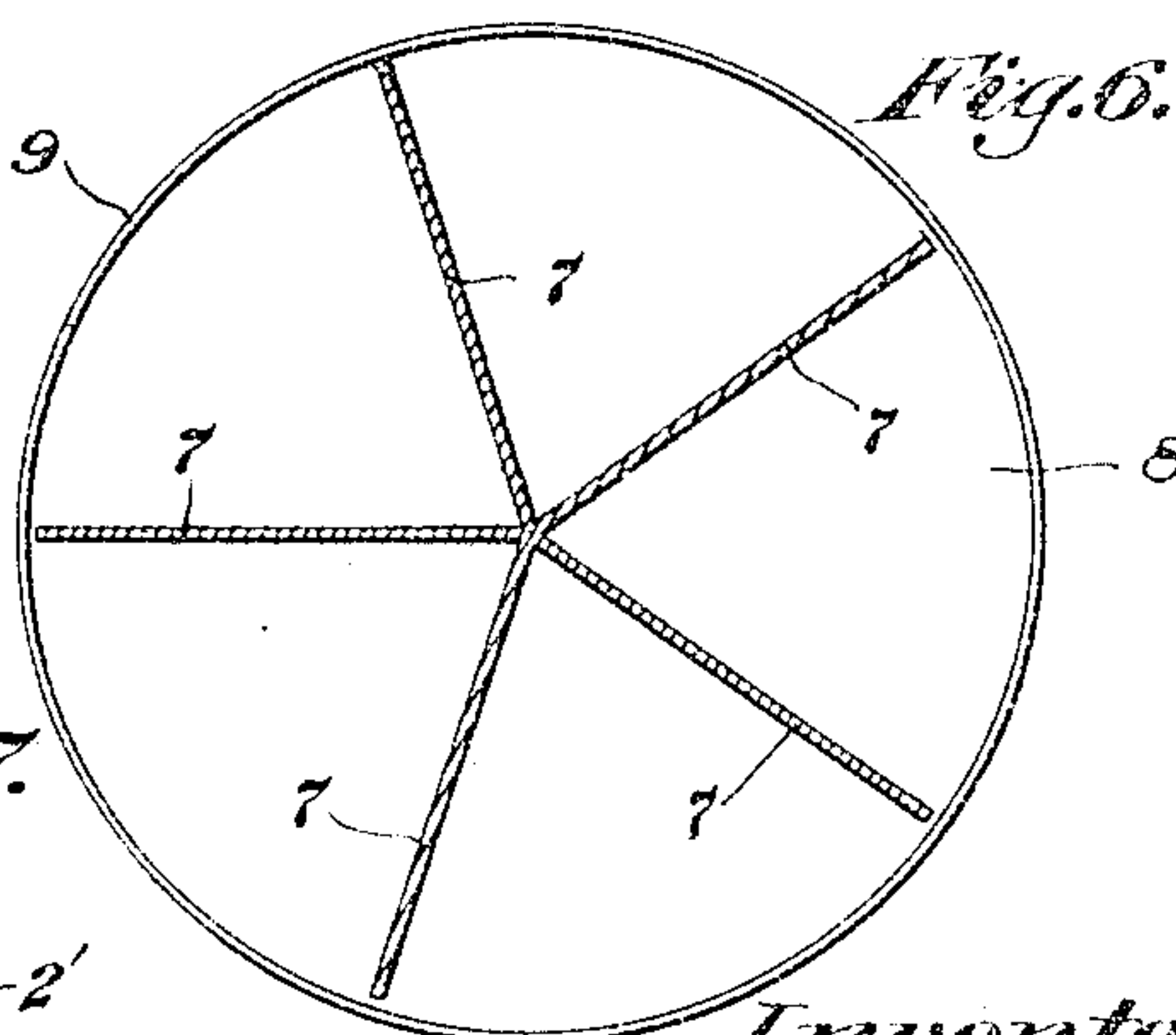
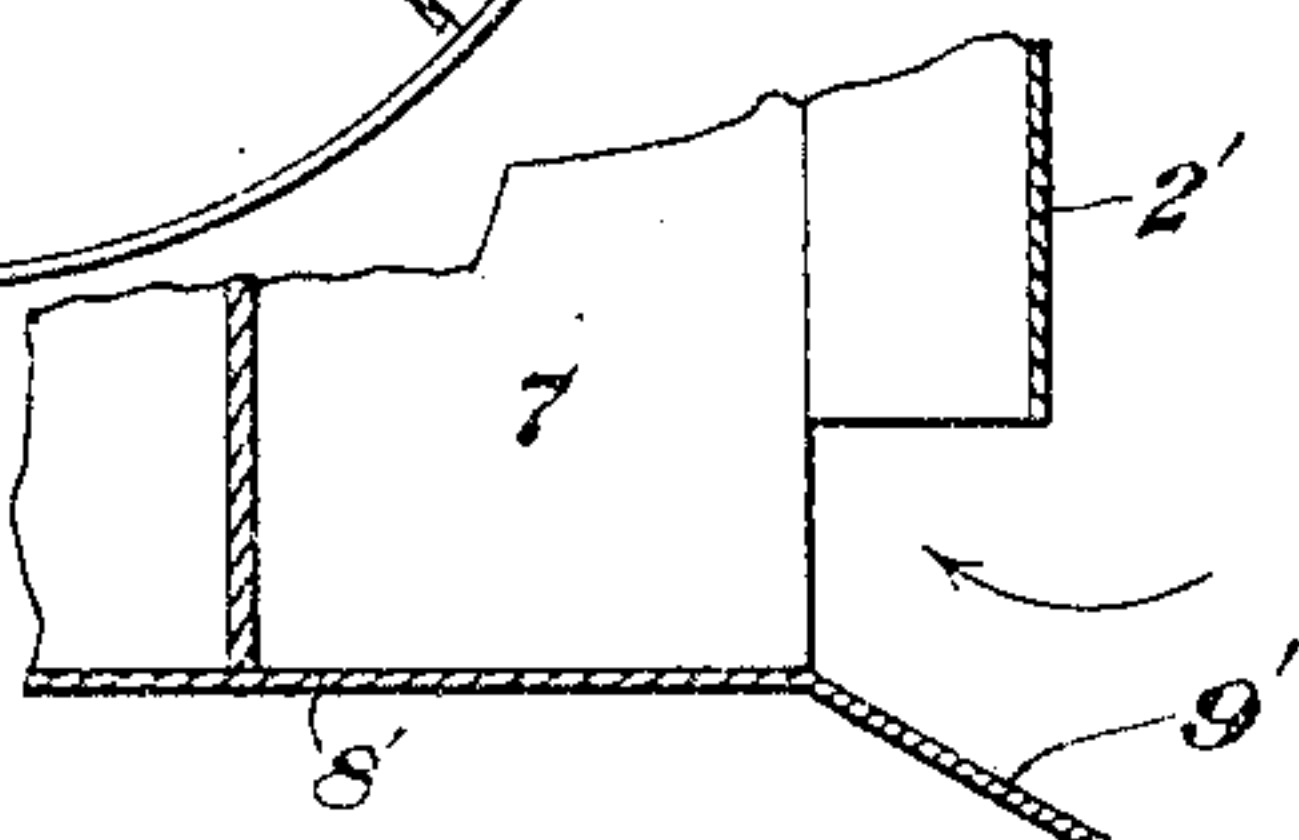


Fig. 7.



Witnesses:

E. R. Rodd.

Chas. S. Spoley.

Inventor:

Thaddeus S. Leese
by C. M. Clark
att.

UNITED STATES PATENT OFFICE.

THADDEUS S. LEESE, OF BELLEVUE, PENNSYLVANIA.

AIR-BAFFLER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 787,196, dated April 11, 1905.

Application filed January 19, 1905. Serial No. 241,714.

To all whom it may concern:

Be it known that I, THADDEUS S. LEESE, a citizen of the United States, residing at Bellevue, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Air-Bafflers for Lamps, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of the specification, in which—

Figure 1 is a view in side elevation of my improved air-baffler applied to the base of a lamp. Fig. 2 is a central vertical section thereof, showing the downwardly-projecting stem of the lamp and the perforated base. Fig. 3 is a partial vertical section showing a modified construction adapted for application to lamps having no central depending portions. Fig. 4 is a cross-section on the line IV IV of Fig. 2. Fig. 5 is a similar section on the line V V of Fig. 2. Fig. 6 is a similar section showing a different number of vertical partitions. Fig. 7 is a vertical sectional detail view illustrating a modification.

My invention refers to an improved device for preventing or overcoming the effects of air-currents upon the operation of lamps wherein the air is introduced from the outside atmosphere to the interior for the purpose of combining with a fuel-gas to produce illumination by combustion. In this class of lamps it is desirable and necessary for the best results that the incoming air shall be as nearly as possible regular in its flow and devoid of any unnecessary pressure or currents. Otherwise the efficient operation of the lamp is interfered with, the flame being sensitive to variations in pressure, and where the lamp is exposed, as is frequently the case—as, for instance, in street use—it becomes necessary to protect it by a device which will entirely baffle and reduce the force of the air-currents no matter from what direction, so that the air will enter the lamp at an even flow and at the same time prevent a back draft or suction.

While my improved baffler is capable of application and use with various types of construction, or, in fact, with any make of lamp wherein the air is introduced from below, I have shown it in Fig. 2 of the drawings as in-

corporated with a type of lamp for which Letters Patent of the United States were issued to me on December 8, 1903, numbered 746,637.

The baffler as shown is cylindrical in form, consisting of a main shell or body portion 2, adapted to be secured to a downwardly-projecting circular flange 3 by means of a bayonet-joint 4, thus facilitating easy attachment and removal of the baffler. The cylindrical shell 2 terminates in an inwardly and downwardly slanting coping 5, providing a reduced annular space 6, through which the air enters upwardly, while dividing-walls 7 extend entirely across beneath the coping, intersecting each other at right angles, as shown, thus dividing the opening 6 into four segmental-shaped apertures, as shown in Fig. 5, having rectangular inner corners converging toward the center and outwardly-extending walls at right angles to each other, which walls extend practically to the outer edge of the casing 2. These walls are incorporated with the cylindrical casing or shell 2 in any suitable manner, as by soldering or riveting, and extend downwardly below the bottom portion and coping thereof, as shown, and are provided with a horizontal bottom 8 in circular pan form, corresponding approximately in diameter to shell 2. The bottom pan may be provided with an upwardly-turned peripheral edge 9 or other stiffening inclosing element, although it may be merely flat. The cross-partitions 7 are also extended upwardly, as shown, to approximately the height of the shell 2, so as to abut against the under side of the lamp-body, and it will be seen that by this arrangement the incoming volume of air from any direction will be carried up through any one of such segmental-shaped chambers and delivered upwardly through the perforated bottom of the globe-holder of the lamp to the flange 3 of which the shell is secured.

10 is a centrally-arranged cylindrical cup extending downwardly within the interior of the shell and connected with the partitions 7, as shown, thus providing an interior clearance-space for the adjusting-screw of a lamp of my construction. It is obvious, however, that this cup is not necessary except where such clearance is to be provided, and, if de-

sired, the partitions 7 may be extended clear up to a common level at the central portion, as shown in the modified construction of Fig. 3, without changing the operation of the device.

As thus constructed, it will be seen that the incoming air from any direction will mainly enter to the interior of the baffler through that opening 6 against which the current most directly blows, as indicated by arrow *a*, and that its force will be largely counteracted and reduced by the downwardly-deflecting coping 5, causing the current to first be projected against the bottom pan 8. The flange 9 also prevents the direct entrance of the air inwardly to the bottom of the opening 6, so that practically all of the air-current expands its force against the converging walls formed by the partition 7, as controlled by the coping 5 and flange 9. The incoming air then reverses its direction, as indicated, in order to pass upwardly into the lamp, and where the cup 10 is used is further baffled by striking against it or against any centrally-arranged solid portion of the lamp, as the disk 10', and its entrance through the bottom portion of the lamp and up into the interior is thus rendered comparatively slow, regular, and practically independent of the outside pressure and entirely subject to the suction or draft of the lamp. By reason of the inwardly-converging tapering walls the entrance of the incoming air is facilitated, while the reverse force of suction or back draft, caused by currents passing around the lamp to the other side, is largely reduced and obviated by the same reduced inwardly-tapering walls on the other side. The effects of suction tending to exhaust the air from the interior are thus obviated, so that it is impossible to at any time take air from the lamp faster than it is supplied. All danger of putting out the light is thus prevented. It will be understood that in lamps of this type the incoming air is also further baffled and excess pressure or irregularity of the current is entirely eliminated by the tortuous circulation to which the air is usually subjected in its further progress through the lamp in the operation of preheating and before combustion occurs.

It will be understood that the angle of the coping 5 may be changed or varied within the judgment of the skilled mechanic or to suit special adaptations or particular types of lamps or that it may be entirely dispensed with; also, that the number of partitions 7 may be varied either more or less, as suggested and shown in Fig. 6. In Fig. 7 I have illustrated a modified construction in which the bottom pan 8' is provided with an annular outwardly and downwardly projecting apron 9', while the casing 2' terminates

somewhat above said apron, leaving an intervening space for the entrance of the air without employing the inwardly-extending coping 5, the construction otherwise being the same as that herein described. Such modified construction will give good results in practice and operates to permit the entrance of the air on the current side and to prevent undue suction on the opposite side, the main baffling effect being produced by the casing 2 and the converging partitions 7. It will be understood that I do not, therefore, desire to be limited to the exact form shown and described, although I have secured excellent results with the forms shown in actual use, and that such or other changes or variations if made are to be considered as within the scope of the following claims.

What I claim is—

1. A baffler consisting of a cylindrical shell having a downwardly and inwardly extending coping providing a tapering opening, cross vertical partitions extending above and below the coping, and a bottom pan, substantially as set forth.
2. A baffler consisting of a cylindrical shell, vertical partitions extending across the interior space thereof, a bottom pan, and a tapered wall providing a reducing entrance-opening, substantially as set forth.
3. A baffler consisting of a cylindrical shell having a downwardly and inwardly extending coping providing a tapering opening, cross vertical partitions extending above and below the coping, a bottom pan, and a centrally-arranged partition extending across the interior of the device at its upper portion, substantially as set forth.
4. A baffler consisting of a cylindrical shell provided with cross vertical partitions and a bottom pan located below the shell, with an intervening air-space, substantially as set forth.
5. A baffler consisting of an inclosing shell adapted to be incorporated with the base of a lamp and provided with vertical cross-partitions extending below the lower edge of the shell, with a bottom pan therefor, substantially as set forth.
6. A baffler consisting of an inclosing shell adapted to be incorporated with the base of a lamp and provided with vertical cross-partitions converging toward the center and extending below the lower edge of the shell, with a bottom pan therefor, substantially as set forth.

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

THADDEUS S. LEESE.

Witnesses:

R. H. McLARN,
C. M. CLARKE.