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W. S. HAMM.
LAMP AND LANTERN.
APPLICATION FILED FEB. 18, 1907.

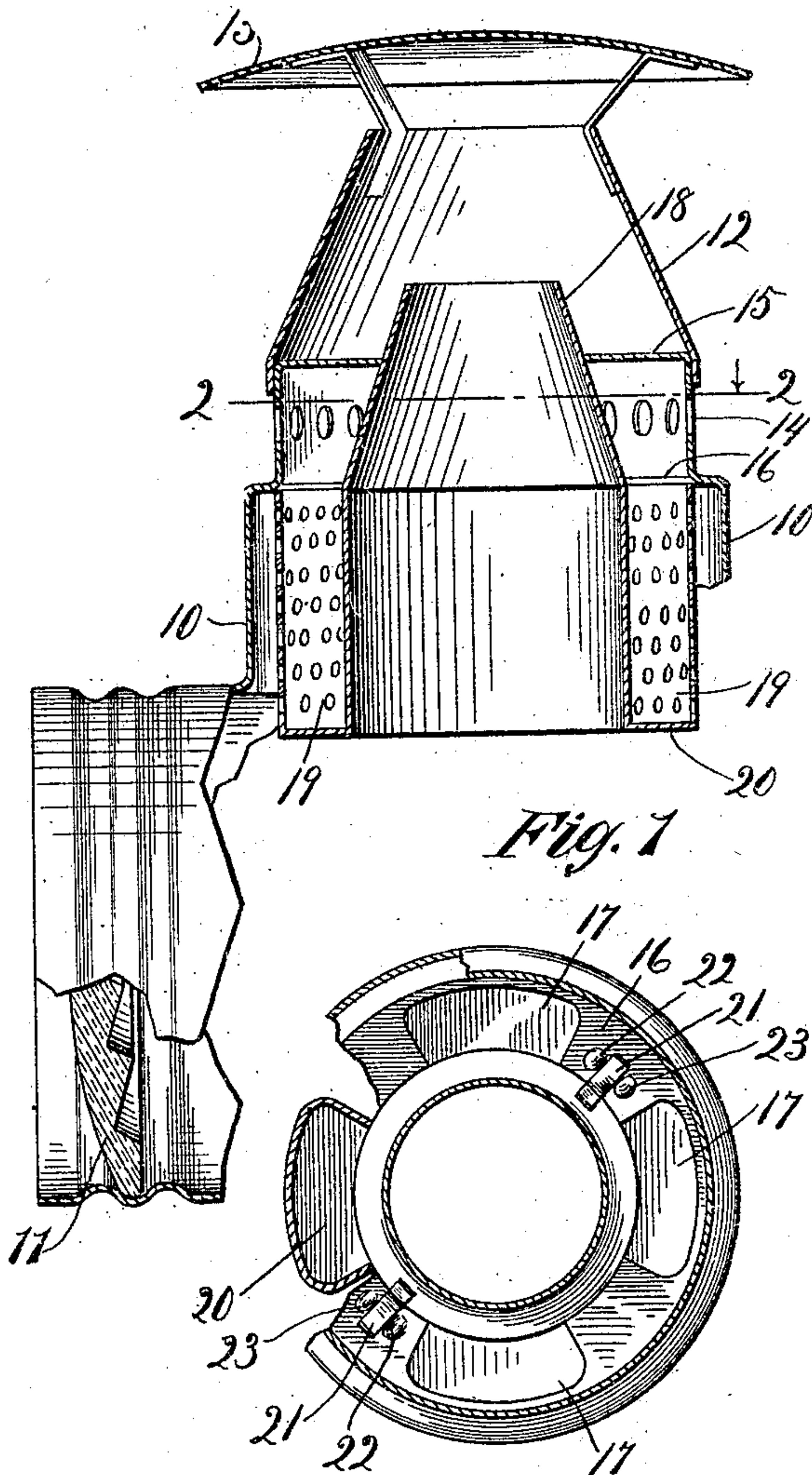


Fig. 1

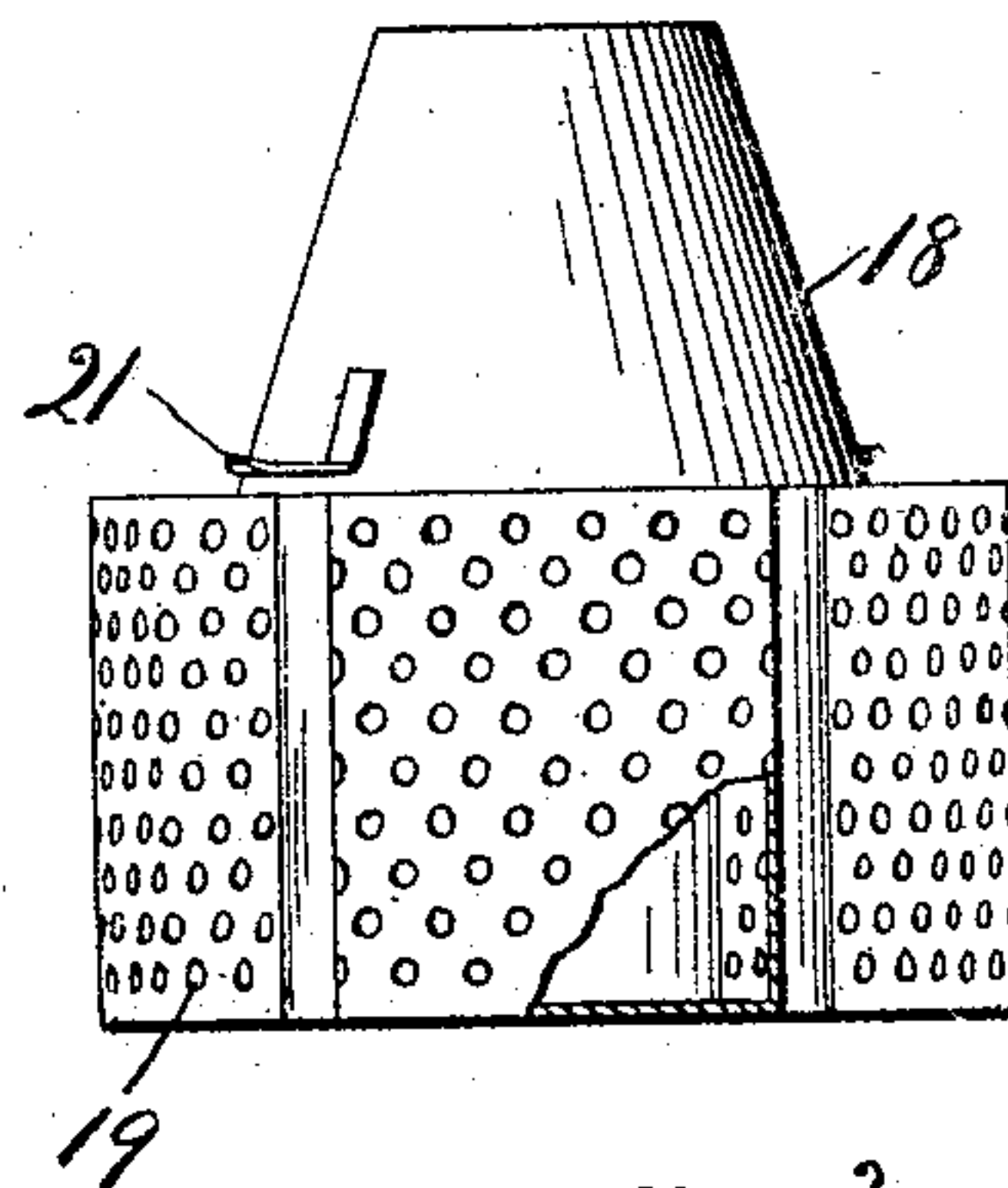


Fig. 3.

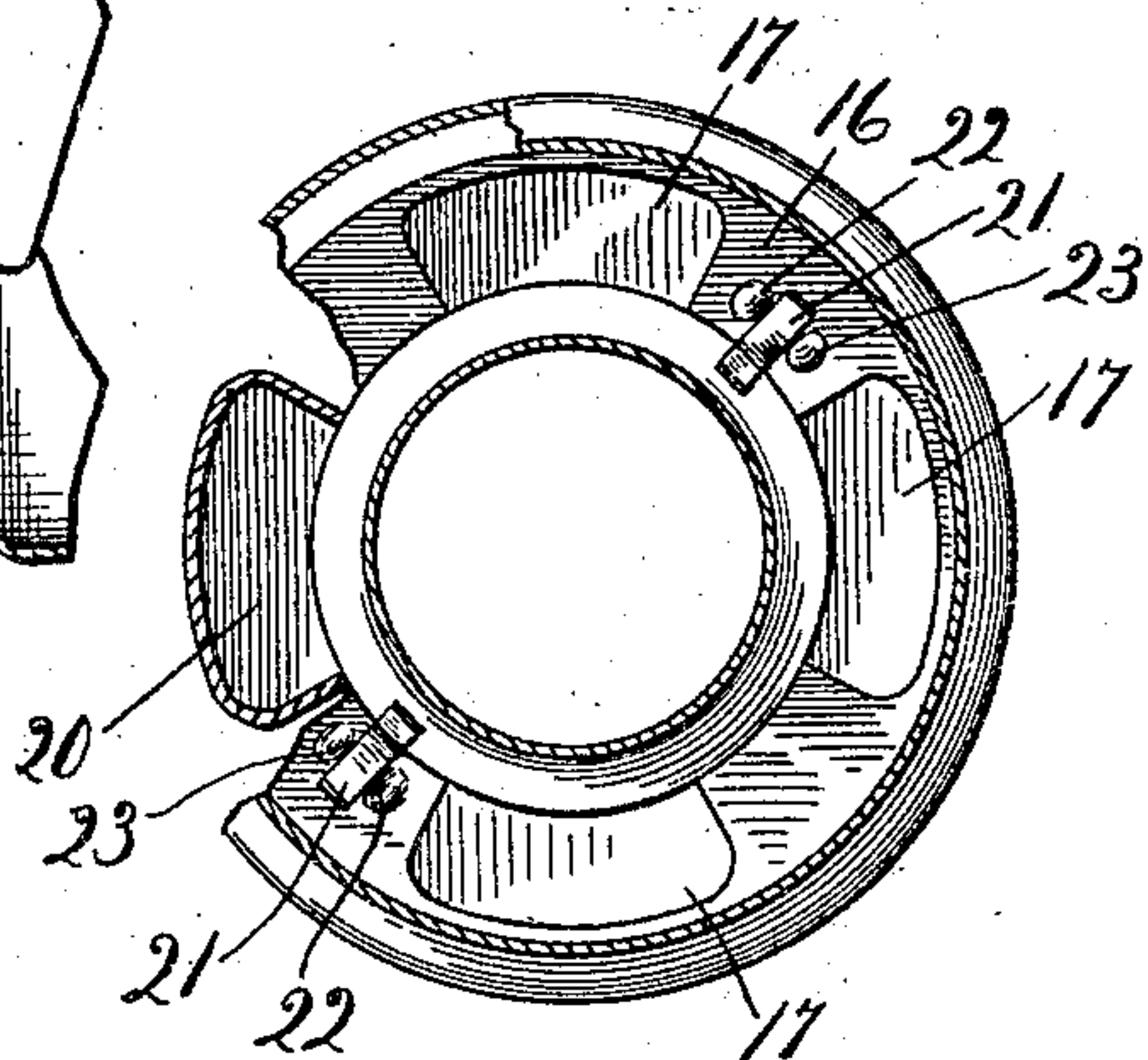


Fig. 2.

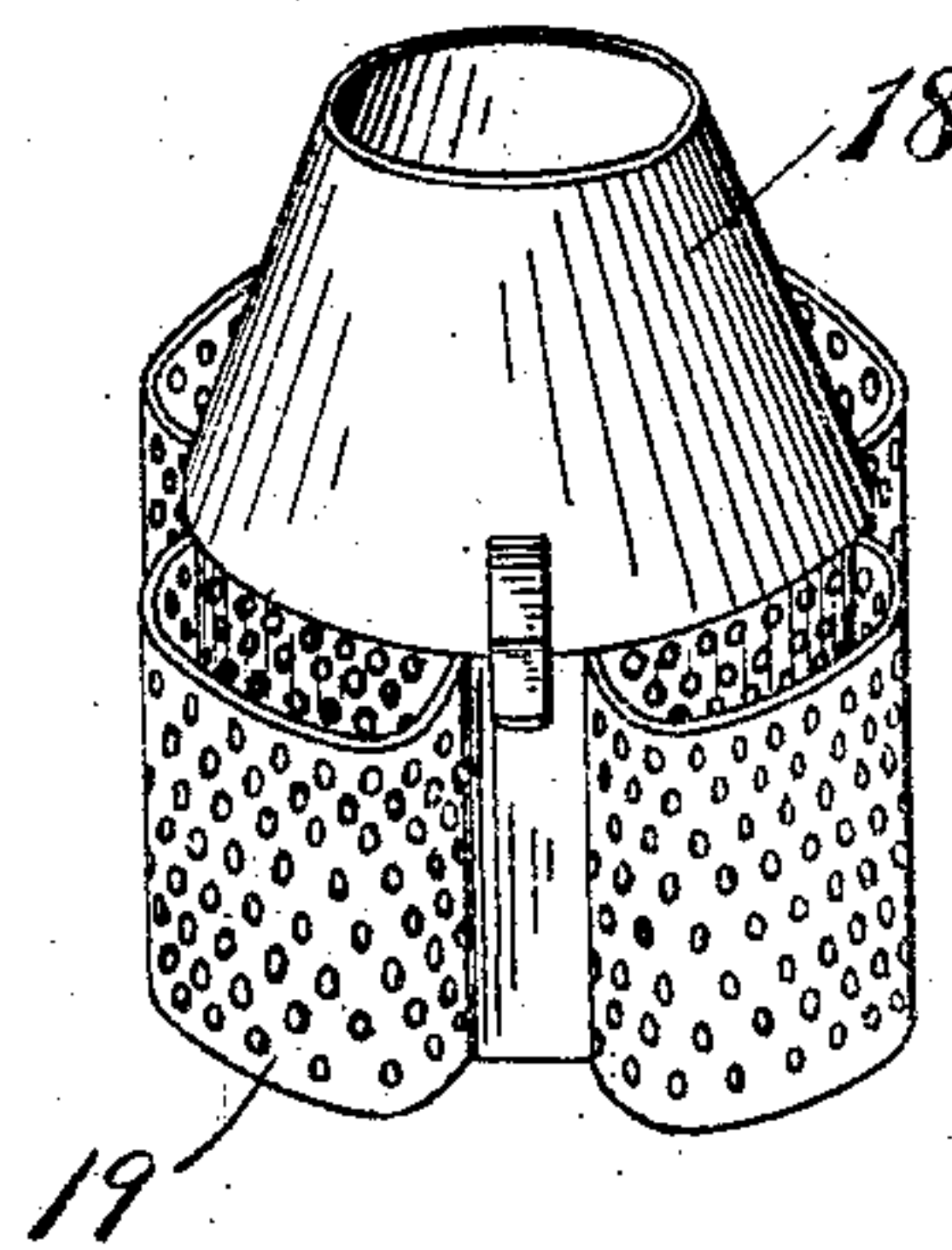


Fig. 4.

Witnesses:
W. H. Cotton
E. M. Klatcher

Inventor
William S. Hamm
By Louis K. Giesgen
Atty

UNITED STATES PATENT OFFICE.

WILLIAM S. HAMM, OF LAKESIDE, ILLINOIS.

LAMP AND LANTERN.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM S. HAMM, a citizen of the United States, and resident of Lakeside, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Lamps and Lanterns, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to lamps, and is also adapted to lanterns used in railway service, its object being to provide improved means for preventing such lamps from being extinguished by drafts and air currents to which they are exposed in use, and for preventing the accumulation of moisture on the inner surface of the lamp or lantern; and it consists of the structure hereinafter described and which is illustrated in the accompanying drawings, in which—

Figure 1 is a detail, partly in section, of a switch or signal lamp embodying the invention; Fig. 2 is a detail sectional view of the lamp on the line 2—2 of Fig. 1; Fig. 3 is a detail, partly in section, of one of the parts of the lamp; and Fig. 4 is a detail of a modified form of the same part.

The lantern body 10 may be of any desired form. As shown, it is provided with one or more lateral openings, each being provided with a lens 11. The dome 12 is open at the top to permit the escape of the vapors resulting from combustion; as shown, this opening is covered by an elevated cap 13.

The dome is provided adjacent its base with air induction ports 14, arranged, as shown, as an annular series. Above and below these air ports there are placed annular diaphragms 15, 16, the upper one of which is imperforate, the lower one 16 being apertured, as shown at 17. A tubular member 18 fits within the central apertures of the diaphragms and constitutes a smoke flue. Preferably, and as shown, this tubular member takes the shape of a truncated cone, and its walls are imperforate, and incloses, with the two diaphragms and the side wall of the dome, an annular air chamber or wind chest having the ports 14 in its outer wall and the ports 17 in its lower wall.

Depending from the diaphragm 16 and in register one with each of its ports 17, are hollow lobes 19, the upper ends of which are open, their lower ends 20 being closed. These lobes have lateral perforations; as shown in Fig. 3, such perforations being re-

stricted to the outer walls of the lobes, the inner walls being imperforate, this being the preferred form, but as shown in Fig. 4 the inner walls also may be perforated. These depending lobes may be of any desired form in cross section, as shown, they are segmental.

For convenience in assembling I prefer to attach the lobes 19 to the member 18 and to provide the latter member with a plurality of laterally projecting spring fingers 21, so disposed that when the member 18 is inserted upwardly through the diaphragms 15 and 16, the fingers 21 passing through the apertures 17, and is then turned on its axis, these fingers will bear upon the upper face of the diaphragm 16.

In order to prevent the parts from accidental displacement, the diaphragm 16 is preferably provided with a pair of upstanding bosses 22, 23, for frictional engagement by each of the fingers 21. While this forms a convenient and effective means for securing the parts of the lamp in place, any means for removably holding the member 18 and lobes 19 in position for use may be employed.

In service the air for supporting combustion enters the lamp through the parts 14, and, passing downwardly through the lobes 19, sweeps the inner surface of the lamp body, preventing the accumulation of moisture upon it, and reaches the burner. The member 18 constitutes the smoke flue located on the vertical axis of the lamp, and hence directly over the burner, not shown, so that the vapors arising from the combustion find direct and unimpeded egress. When the inner walls of the lobes 19 are perforated, as in Fig. 4, some of the air will, of course, be discharged therethrough and will be carried out of the lamp with the vapors, performing no useful function but not impairing the action of the lamp, for an ample supply of air through the ports 14 is provided for. It may be found to be an economy in manufacture, however, to use foraminous material for the lobes, so that they may be made of stock material instead of specially prepared plates.

I claim as my invention—

1. In a lantern, in combination, a body having a light-emitting side face, a dome having lateral air ports, a pair of annular diaphragms in the dome one above and the other below the air ports, the lower diaphragm having apertures, a tubular member fitted within the central apertures of the diaphragms, and a hollow lobe of foraminous

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material depending from the lower diaphragm and being in register with an aperture thereof.

2. In a lantern, in combination, a body 5 having a light-emitting side face, a dome having lateral air ports, a pair of annular diaphragms in the dome one above and the other below the air ports, the lower diaphragm having apertures, a tubular member 10 fitted within the central apertures of the diaphragms, and a hollow lobe depending from the lower diaphragm and being in register with an aperture thereof and having lateral perforations in its outer face.

15 3. In a lantern, in combination, a body, an air chest at the upper part of the body having outwardly-directed induction ports, a hollow lobe depending from the air chest into the body of the lantern and having lateral 20 eduction ports.

4. In a lantern, in combination, a body, an annular air chest at the upper portion of the body and having outwardly-directed induction ports, a hollow lobe depending from 25 such chest into the body of the lantern and having lateral eduction ports.

5. In a lantern, a body having a dome, a

pair or annular diaphragms in the dome, the lower one being apertured, air ports in the dome wall intermediate the diaphragms, a 30 flue member removably fitting within the central apertures of the diaphragms and carrying depending hollow lobes which register with the lateral apertures in the lower diaphragm and have lateral air ports, and means 35 for holding the flue member in place.

6. In a lantern, in combination, a body, a central eduction flue leading therefrom, a plurality of lobes forming air chambers having perforate walls and depending into the 40 body from its upper portion, and induction ports communicating with the air chambers.

7. In a lantern, in combination, a body 45 having a dome, a central flue leading from the body to the dome, a plurality of air chambers having perforate walls arranged around the flue and depending into the body, and lateral induction ports in the walls of the dome and communicating with the air chambers.

WILLIAM S. HAMM.

Witnesses:

G. L. WALTERS,

LOUIS V. EGGERT.