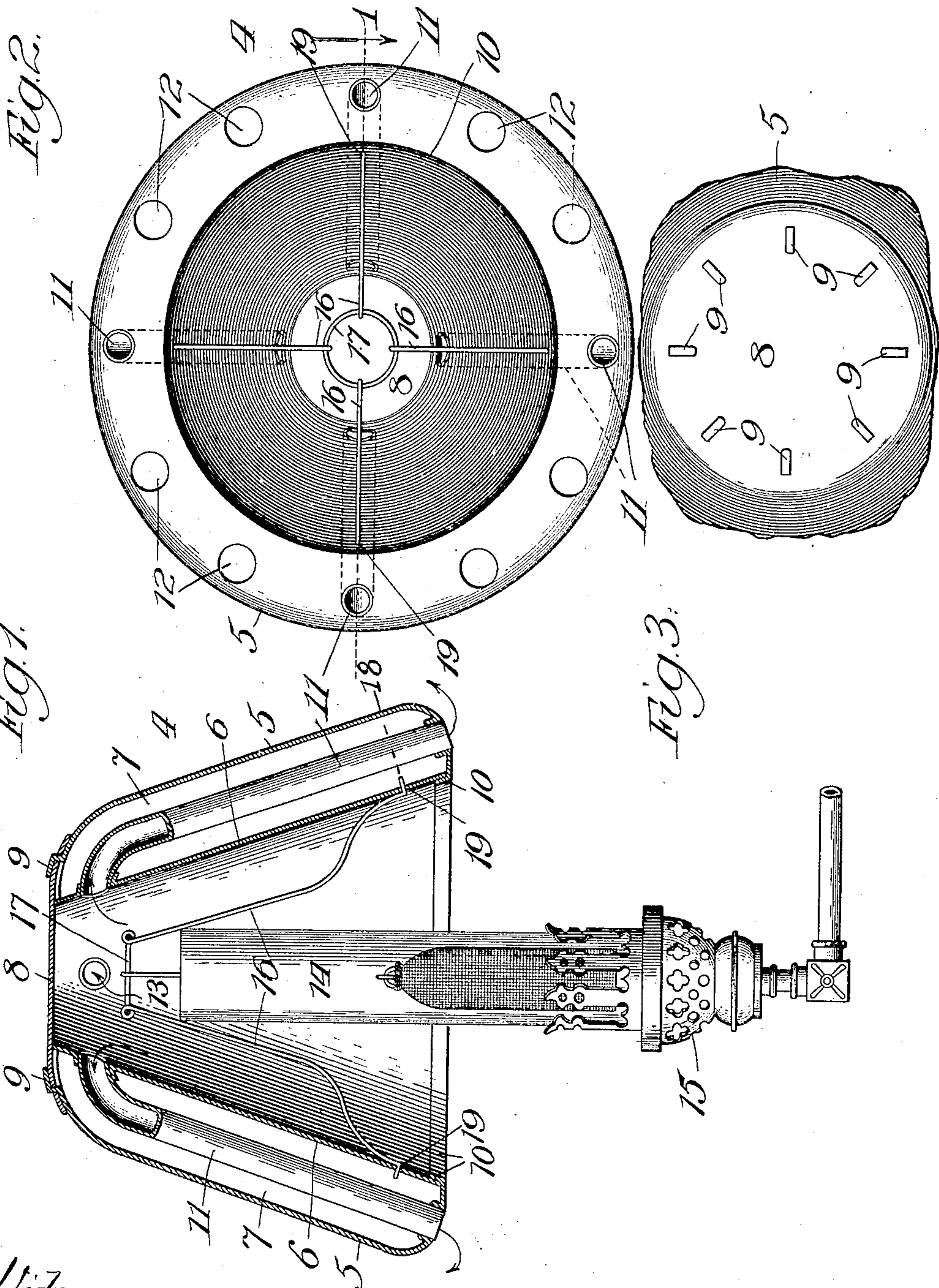


No. 875,990.

PATENTED JAN. 7, 1908.

H. GIDDINGS.
HEATER.

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Witnesses:
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UNITED STATES PATENT OFFICE.

HOWARD GIDDINGS, OF CHICAGO, ILLINOIS.

HEATER.

No. 875,990.

Specification of Letters Patent.

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Application filed March 12, 1906, Serial No. 305,669. Renewed November 7, 1907. Serial No. 401,165.

To all whom it may concern:

Be it known that I, HOWARD GIDDINGS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Heaters, of which the following is a specification.

My invention relates to a heating attachment for use in connection with lamps or gas-burners for deflecting the heat produced thereby, to effect its distribution throughout the atmosphere and thus utilize the heat from a lamp or gas jet for heating purposes.

One of my objects is to provide a deflector of the class referred to which shall be simple of construction, and inexpensive to manufacture, and by which the heat from a lamp or gas-burner to which it is attached may be deflected downwardly in large volume and with force, thereby to mix the heated air with the atmosphere below the lamp.

A further object is to provide a construction having a reflector for the light from the flame, and having means for collecting the soot.

Referring to the accompanying drawing—Figure 1 is a view showing my improved heater seated on the chimney of an incandescent gas-burner, the view of the deflector being in vertical section taken at the line 1 on Fig. 2 and that of the burner being in elevation; Fig. 2, a bottom plan view of the deflector; and Fig. 3, a broken top plan view of the same.

4 is an annular drum preferably constructed of sheet-metal and having an outer wall or shell 5 of frusto-conical form flanged inwardly at its upper and lower edges; an inner wall or shell 6 likewise of frusto-conical form and forming a space 7 between it and the outer shell; and a top-plate 8 overlapping the upper flanged edges of the shell 5 and secured thereto as by a circular series of tongues 9 stamped out of the shell 5 and passing through openings in the top 8. The inner shell fits against the top-plate 8 and is held in position at its upper edge by abutment against the edges of the upper flange of the shell 5 and at its bottom edge by engagement with an overlapping flange 10 on the lower flanged portion of the shell 5.

11 is a series of pipes in the annular space 7 arranged longitudinally thereof, and fastened to and opening at their upper ends through the inner shell near its top, and at their lower ends fastened in and opening

through the flanged lower end of the outer shell to form downward passages or flues for the heated air and products of combustion from the top of the interior of the inner shell to the lower part of the device.

Openings 12 in the lower flange of the outer shell communicating with the space 7 and intermediate of the pipe-openings may be provided, as shown, through which openings air may enter the space 7 and be discharged therefrom in a heated condition.

13 is a frame fastened to the drum and by which the device is adapted to be seated upon the chimney 14 of a gas burner 15, or lamp, as shown in Fig. 1. As shown, it is of wire, and comprises legs 16 and a top ring 17 to which the legs 16 are secured at their upper ends; the lower ends of the legs being inturned as represented at 18, to engage openings 19 in the inner shell for supporting the drum upon the chimney 14.

The heat rising from the burner passes upward through the chimney and around it until it reaches the top of the heater, from which it is deflected into the pipes and downward through them and out at their openings in the lower portion of the drum, the currents of heated air being illustrated by the arrows in Fig. 1. By thus deflecting the heated air and products of combustion, a constant stream of air and hot gaseous products of combustion is directed downwardly with considerable force to a point on a plane some distance beneath the burner, where it spreads out and mingles with the surrounding atmosphere, thereby raising its temperature. Furthermore, the upper closed end of the drum serves to collect the soot which in the case of imperfect combustion rises from the flame, and thus prevents its distribution throughout the room and its lodgment against the ceiling. In addition to the functions just stated the device, by providing a polished surface on the interior of the inner shell, serves to deflect the light downward and concentrate it below the flame, thereby greatly enhancing its usefulness for reading purposes.

What I claim as new and desire to secure by Letters Patent is—

1. A heat-deflector of the character set forth comprising a drum having an inner wall and an outer wall, said drum being provided with openings in its lower end and with openings in its inner wall near its upper end, and pipes between said walls con-

necting said upper openings with said lower openings, for the purpose set forth.

2. A heat-deflector of the character set forth, comprising an annular drum having an inner wall and an outer wall, said walls being concentric with each other and forming an annular space between them, said drum being provided with openings in its lower end and with openings in its inner wall at its upper end, and pipes between said walls connecting the upper openings with the lower openings, for the purpose set forth.

3. A heat-deflector of the character set forth comprising an annular drum of frusto-conical form closed at its top and having an inner wall and an outer wall, said walls being concentric with the other, and having an annular space between them, the drum being provided with a series of openings in its lower end and with a series of openings in its inner wall at its upper end, and pipes connecting the openings in the inner wall with lower openings, for the purpose set forth.

4. A heat-deflector of the character set

forth, comprising an annular drum of frusto-
conical form closed at its top and having an
inner wall and an outer wall, said walls being
concentric with each other, and forming an
annular space between them, the drum be-
ing provided with a series of openings in its
lower end and with a series of openings in its
inner wall at its upper end, pipes connecting
the openings in the inner wall with lower
openings, and a frame secured to the drum
adapted to seat the deflector upon a chim-
ney, whereby the heated air and products of
combustion rising from the lamp are deflect-
ed downwardly through the pipes and dis-
charged at the lower end of the drum, and
whereby openings are provided in the lower
part of the drum for permitting air to enter
said annular space and be discharged there-
from in heated condition.

HOWARD GIDDINGS.

In presence of—

W. B. DAVIES,

J. H. LANDES.