

E. J., C. A., & C. H. DROZ.

HEATER.

APPLICATION FILED NOV. 21, 1908.

936,097.

Patented Oct. 5, 1909.

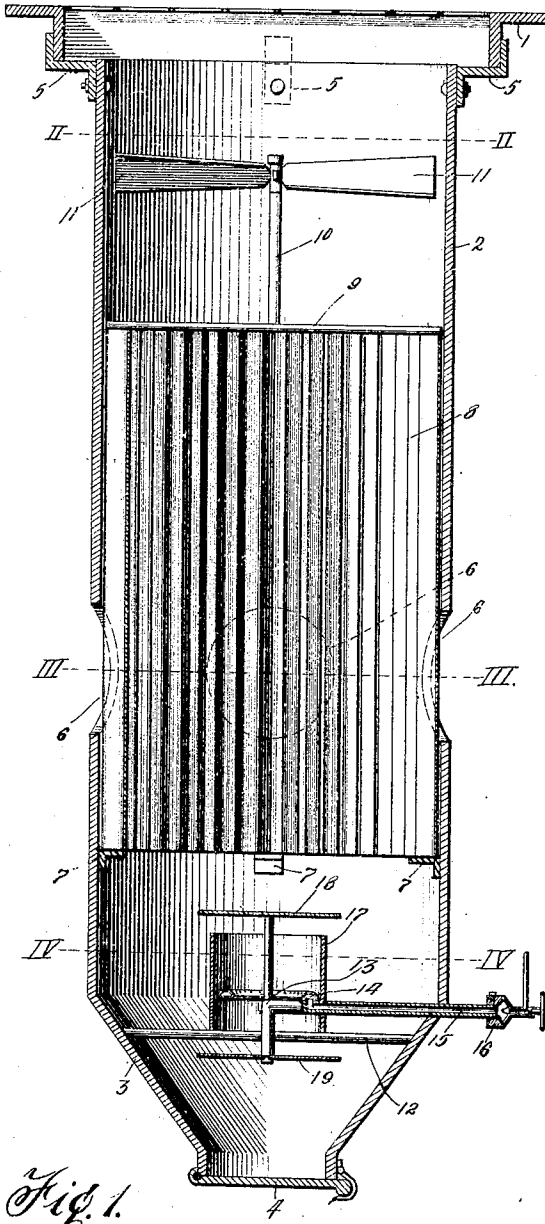


Fig. 1.

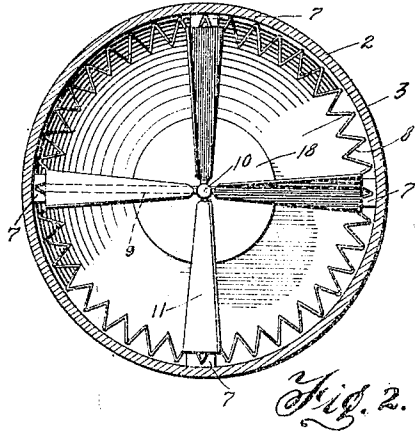


Fig. 2.

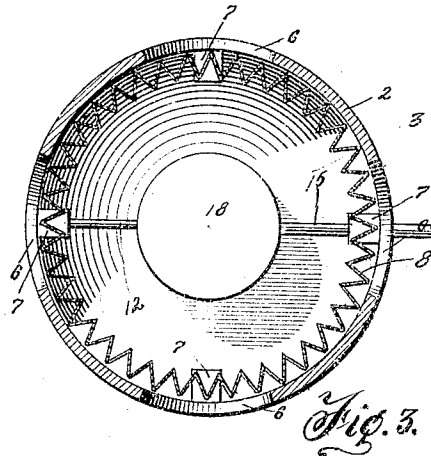


Fig. 3.

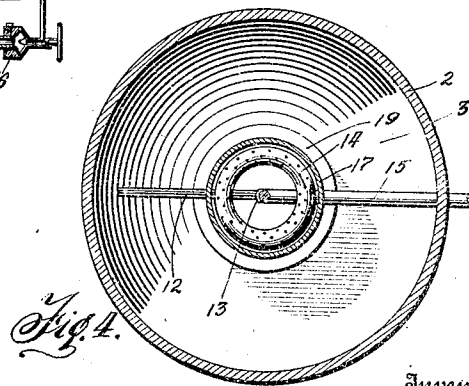


Fig. 4.

Witnesses

R. L. Farrington.
R. E. Butler

Inventors
E. J. Droz.
C. A. Droz,
C. H. Droz,

By

H. E. Evert & Co. Attorneys

UNITED STATES PATENT OFFICE.

EDWARD J. DROZ, CHARLES A. DROZ, AND CHARLES H. DROZ, OF PITTSBURG, PENNSYLVANIA.

HEATER.

936,097.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed November 21, 1908. Serial No. 463,843.

To all whom it may concern:

Be it known that we, EDWARD D. DROZ, CHARLES A. DROZ, and CHARLES H. DROZ, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Heaters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to heaters, and more particularly to that type of heater commonly styled a "hall heater", the heater being located beneath the floor of a hall or room and in connection with a register for supplying the hall or room with heated air.

The object of our invention is the provision of novel means in connection with a heater of the above type for insuring a thorough draft of cold air through the heater, whereby the burner located therein can continuously supply heated air.

Another object of our invention is to provide a heater of the above type with a novel burner that will not be accidentally blown out when the heater is opened for cleansing purposes.

A further object of this invention is to provide a heater having an interior shell presenting a large heating area against which cold air is adapted to contact.

The present invention is an improvement upon our Patent No. 891,680, granted June 23rd, 1908.

With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be hereinafter described and then specifically claimed.

Referring to the drawings: Figure 1 is a vertical sectional view of our heater, Fig. 2 is a horizontal sectional view taken on the line II—II of Fig. 1, Fig. 3 is a similar view taken on the line III—III of Fig. 1, and Fig. 4 is a similar view taken on the line IV—IV of Fig. 1.

In the accompanying drawings, 1 designates a register of the ordinary well known type, adapted to be supported in a floor. Suspended beneath said register is a vertical cylindrical shell 2 having a contracted or frusto-conical lower end 3 provided with a hinged door 4 for normally closing the lower end of said shell. The shell 2 can be sus-

ended beneath the register 1 by cables, or as shown, fixed to said register by a plurality of straps 5. The shell 1 intermediate the ends thereof is provided with a plurality of circumferentially arranged air inlet openings 6, and directly beneath each opening is arranged a bracket 7. Supported upon the brackets 7 is a corrugated cylindrical inner casing 8, and arranged transversely on the upper end of said casing is a bar 9 supporting a central upright 10 having a revoluble horizontal bladed fan 11. The corrugations of the casing 8 are V-shaped in cross section and are adapted to provide a large area with which cold air contacts.

The frusto-conical lower end 3 of the shell 2 is provided with a transverse brace 12 and arranged centrally of said brace is a post 13 supporting a circular burner 14, with which connects a gas supply pipe 15 having a suitable air mixer 16. The burner 14 is surrounded by a cylindrical burner casing 17 adapted to rest upon the transverse brace 12. The post 13 above and below said burner casing supports disk-shaped deflectors 18 and 19. The gas at the burner 14 is ignited by opening the door 4, and it is while this door is opened that the lower disk-shaped deflector 19 prevents the flame from being blown out or extinguished by a draft of air entering the lower end of the shell 2. The door 4 is also opened when the shell is to be cleansed. The heat units from the burner 14 are deflected outwardly from under the peripheral edges of the deflector 18 and upwardly against the corrugated inner side of the casing 3. Cold air entering the openings 6 is adapted to contact with the heated sides of the casing 3, and the heated air is disseminated within the shell 2 by the fan 11. The blades of the fan 11 are positioned whereby said fan will be revolved by the hot air escaping upwardly in the shell 2, and the position of the blades is adapted to draw cold air into the register 1 from the compartment with which said register communicates.

While in the drawings forming a part of this application there is illustrated the preferable form of construction embodying the invention, it is understood that the elements therein may be varied or changed as to the shape, proportion and exact manner of assemblage without departing from the spirit of the invention.

Having now described our invention what we claim as new, is:—

1. In combination, a register, a heater comprising a vertically-disposed shell suspended from said register, said shell having a frusto-conical lower end, a door normally closing the frusto-conical end of said shell, said shell having a plurality of circumferentially-arranged openings formed therein, a plurality of supporting-brackets, attached to the inner wall of said shell below said openings, a vertically-disposed corrugated inner casing supported upon said brackets, a horizontal revoluble fan supported by said inner casing above the upper opening thereof, a cylindrical burner casing mounted in the frusto-conical lower end of said shell, disk-shaped deflectors arranged above and below said burner casing, and a burner located within said burner casing.
2. A heater of the type described, comprising a vertically-disposed outer shell having a normally closed lower end, said shell having a plurality of circumferentially-arranged openings formed therein intermediate its ends, a vertically-disposed corrugated inner casing supported in said shell and of

less length than the outer shell, a horizontal revoluble fan supported by the upper end of said inner casing above the upper end thereof, a burner casing supported within said shell below said inner casing, a burner within the burner casing, and deflectors arranged above and below said burner casing.

3. A heater of the type described, comprising an outer shell, said shell having a plurality of openings formed therein intermediate its ends, a corrugated inner casing supported within said shell and terminating short of the ends of the outer shell, a fan revolubly-mounted in the space within the outer casing above said inner casing, a burner casing supported within the casing below the inner casing, a burner within said burner casing, and deflectors arranged above and below the burner casing.

In testimony whereof we affix our signatures in the presence of two witnesses.

EDWARD J. DROZ.
CHARLES A. DROZ.
CHARLES H. DROZ.

Witnesses:

MAX H. SROLOVITZ,
A. J. TRIGG.