W. H. TOWERS.

Drum Gas Heater.

No. 45,655. Patented Dec. 27, 1864.

Fig. 2,

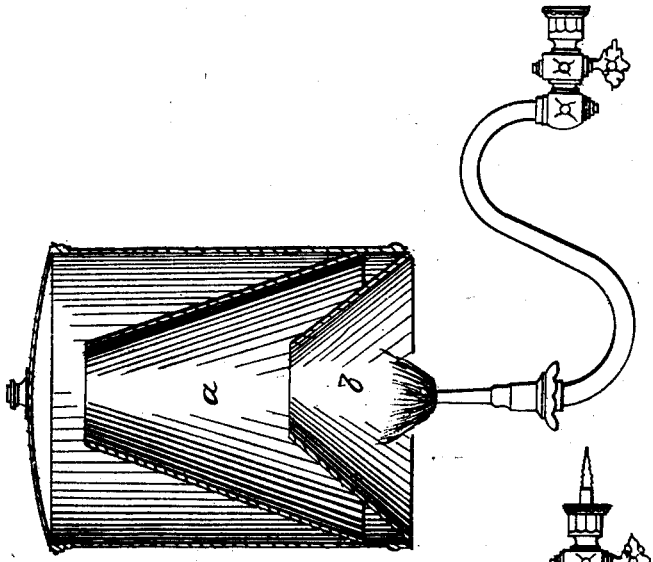
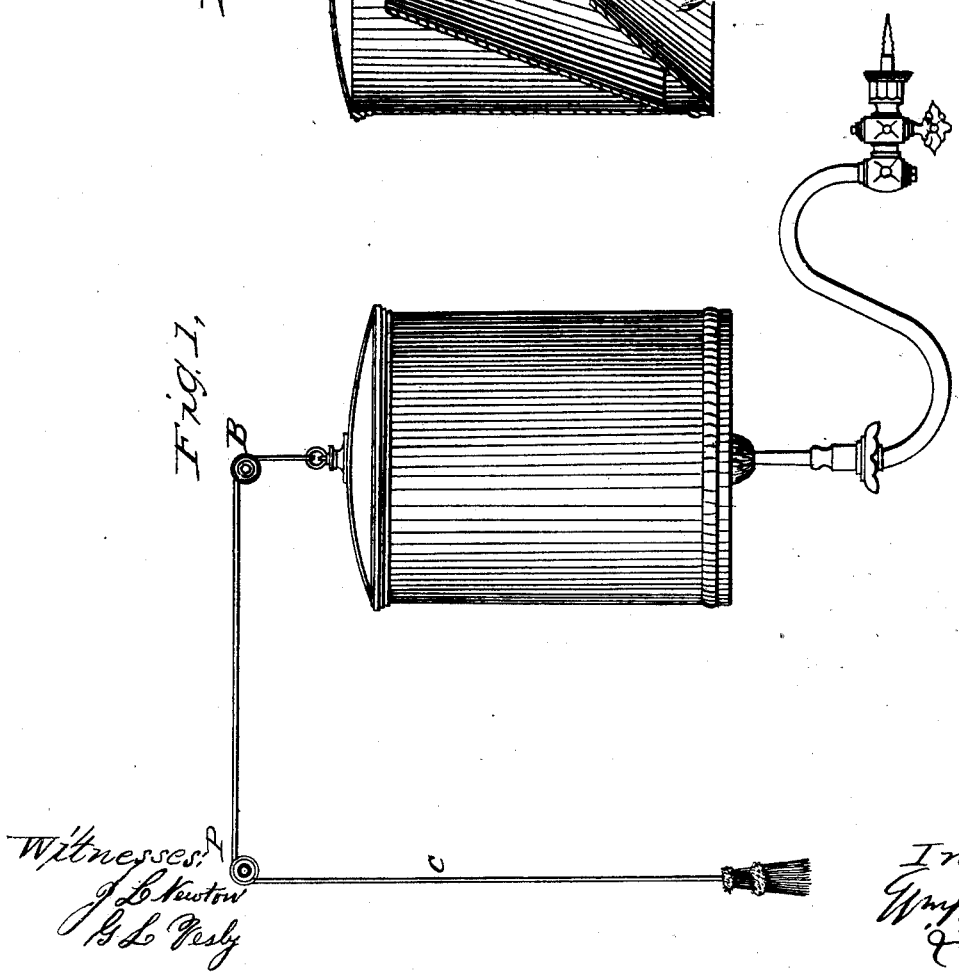


Fig. 1,



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. TOWERS, OF NEW YORK, N. Y.

DRUM GAS-HEATER.

Specification forming part of Letters Patent No. **45,655**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, WILLIAM H. TOWERS, of the city, county, and State of New York, have invented a new and Improved Drum Gas-Heater, for heating apartments of whatever nature with the same gas that is used in lighting; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Figure 1 is a side view of the drum in operation, showing the bracket, the position of the drum over the lighted gas, the cord, pulleys, &c. Fig. 2 is a vertical section of the same, showing a section of the drum, the inclosed cylinders *a* and *b*, and their positions with reference to each other. The letters P and C refer to the cord and pulley.

The nature of my invention consists in collecting and confining the waste heat which escapes from gas-burners, wherever used, in such a manner that while an apartment is lighted by gas, as in the common mode of lighting, it will also be heated as much as desired, and without consuming any additional gas or diminishing illumination.

In order to make others understand the great practical use and advantage of my invention, I will proceed to describe the apparatus, which is so simple in its character that it will be readily understood by a glance at the accompanying drawings.

Fig. 1 represents a cylinder or drum, open at one end, made of sheet-iron or any other radiating metal which will effect the same purpose, suspended by a cord or chain attached to the closed end of the drum by a ring or other convenient fastening, and going over a pulley or pulleys fastened to the ceiling, as described in Fig. 1, or in any convenient mode to suit one's pleasure. This drum, as will be perceived by Fig. 1, is suspended directly over the flame or jet of lighted gas, so that it may be partially or entirely within the drum, as more or less heat is desired, This drum contains two conical cylinders. (but one or more may be used,) marked *a* and *b* in Fig. 2, the shape and positions of which are clearly seen. It may also be raised or lowered by pulleys.

The cylinder *b* is movable, and when used in the position in which it is seen in Fig. 2 it has the effect of a shade, and may also be made of bright material and act as a reflector. The same may be taken out and inverted, in which case the flame will be nearly or entirely concealed within the drum when no light is needed or when used in the day-time.

The cylinder marked *a* rests its base on the sides of the drum, upon any slight projection or rib projecting within the drum, and is not designed to be movable, though it may be taken out, if necessary, and it extends nearly to the top of the drum. The shape and position of this cylinder are clearly seen by reference to Fig. 2.

The air heated by the flame rises through the cylinders *b* and *a*, and passes over into the drum, where it is confined, and heat is radiated from the surface of the drum in precisely the same manner as it is from the common air-tight stove. The drum may be made of different sizes and any kind of radiating material, and may be used wherever the common gas-burner or gas-burner of whatever character is used, and in whatever position placed, whether suspended from the ceiling or over a bracket, or carried near the floor and used in a fixed position. This drum throws off heat so rapidly, and the numerous appliances to which it may be made, and with no extra cost, in the night-time, at least, that its practical use and advantage are readily seen.

What I claim as my invention, and desire to secure by Letters Patent, is—

The application and arrangement of the drum and cylinders to the common gas-burner or any gas-burner, applied and arranged as above described.

WM. H. TOWERS.

Witnesses:

G. L. VESTY,

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