(No Model.) 2 Sheets—Sheet 1.

A. C. KENDEL.

Smoke Bell.

No. 231,587. Patented Aug. 24, 1880.

Fig. 1.

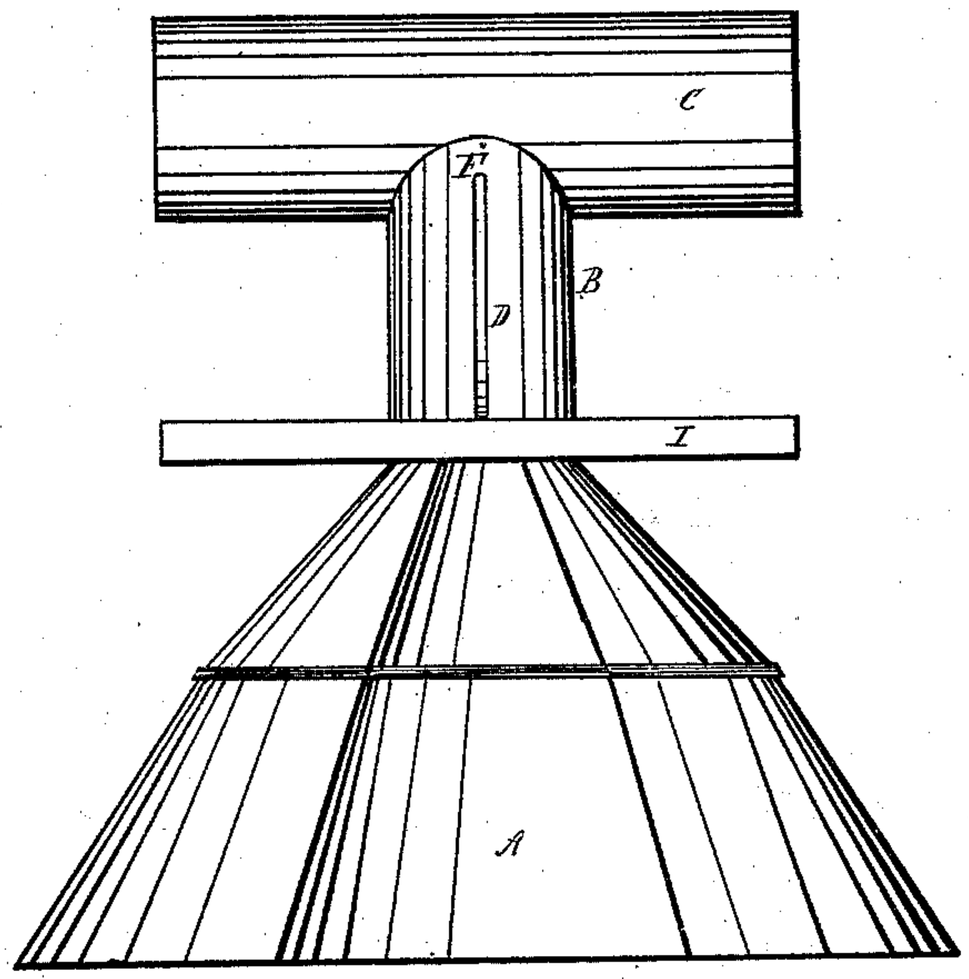
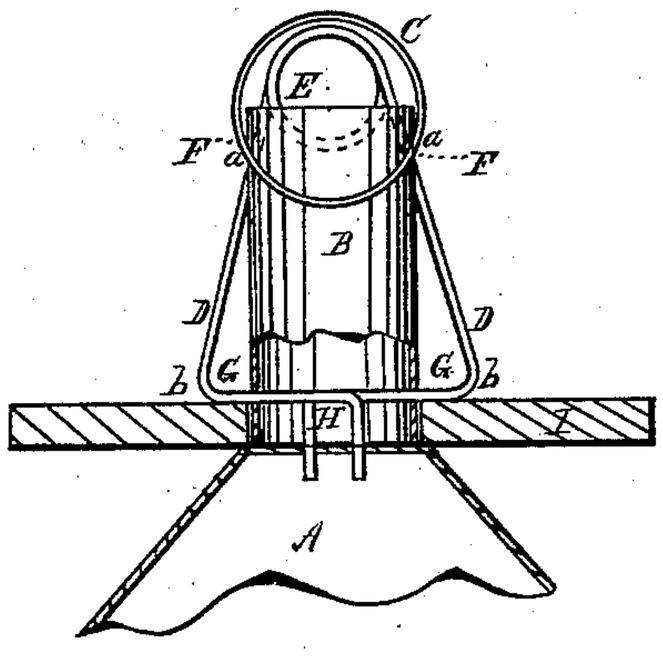


Fig. 2.



Witnesses.
S. G. Clark
J. V. Warner

Inventor.
A. C. Kendel
per W. H. Burridge
Atty.

(No Model.)

2 Sheets—Sheet 2.

A. C. KENDEL.

Smoke Bell.

No. 231,587. **Patented Aug. 24, 1880.**

Fig. 3.

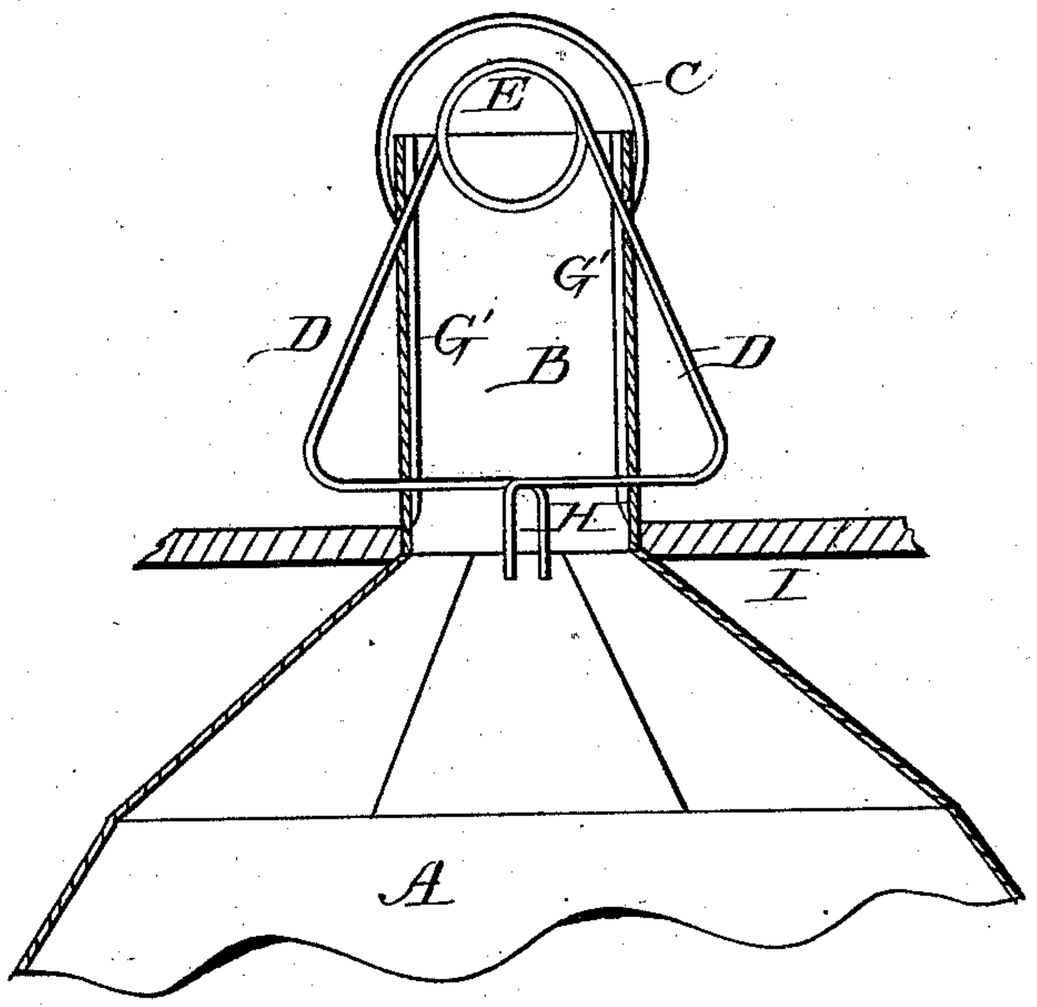
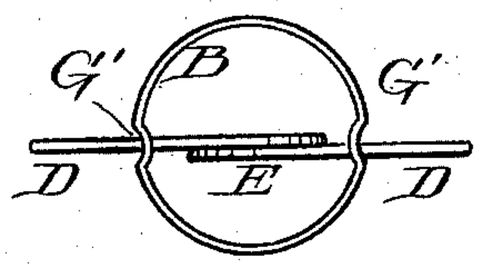


Fig. 4.



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W. H. Burridge
atty.

UNITED STATES PATENT OFFICE.

ADOLPHUS C. KENDEL, OF CLEVELAND, OHIO.

SMOKE-BELL.

SPECIFICATION forming part of Letters Patent No. 231,587, dated August 24, 1880.

Application filed May 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS C. KENDEL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Smoke-Bell for Gas and Oil Burners; and I do hereby declare that the following is a full, clear, and complete description thereof.

This invention relates to a smoke-bell so arranged in relation to the burner as to carry off the smoke, heat, and products of combustion from a gas or oil burner, at the same time acting as a ventilator and reflector.

The improvement consists in the devices for attaching and detaching the bell to and from the ceiling, and for conveying off the smoke, heat, &c., from the burner, combined with the bell.

The bell may be of any desirable form and varied in size, and is connected to the ceiling by means of a pipe, through which ceiling the pipe is extended into the space between the upper floor and the ceiling directly under it. Into this space the products of combustion are discharged, leaving the ceiling clean and the room ventilated; or by means of a flue connected to the pipe the products may be carried out of the building. By the employment of a spring connected with the pipe the apparatus may be readily secured in place or detached, as may be required.

That others may fully understand the construction and use of the said invention, reference will be had to the accompanying specification, and to the annexed drawings, making part of the same, in which—

Figure 1 is a side elevation of the apparatus, and Fig. 2 a section thereof. Fig. 3 is a transverse vertical section. Fig. 4 is a sectional plan view.

Like letters of reference refer to like parts in the several views.

The bell A, Fig. 1, may be of glass or metal, and of any ornamental configuration, or otherwise, and of a size suitable for the purpose. The pipe B is attached to the bell by any suitable means, and may be of suitable length, depending upon the distance between the burner and the ceiling, and also the altitude of the bell above the burner.

The upper end of the pipe B is adapted to be connected with a flue or pipe, C, which may be extended to the exterior of the building or into the chimney, to convey off the smoke, heat, and gases from the burner. In an ordinary wooden building the flue may not be required, as the space between the floor and ceiling below usually extends to the space formed by the studding between the outside and inside walls. Hence the space under the floor and that caused by the studding would form conduits for conveying off the smoke, gases, &c., from the burners through the pipe.

In all ordinary cases the smoke, &c., may be discharged into the space below the floor, as mentioned, as the principal use of a smoke-bell is to protect the ceiling from sooty deposits, and there can be no danger or inconvenience in permitting the discharge from the pipe B to enter the space below the floor.

Connected with the pipe B is a spring, D, Figs. 2 and 3. In the central or upper part is formed a coil, E. The arms of spring D then branch and extend down through the sides of the pipe at F in an angular direction to the bend G, thence reaching past each other and forming handles by a second bend at H. The spring is kept in position by the openings in the pipe B, through which the arms D pass.

On two sides of the pipe B are depressions G′, in length and depth corresponding with the size and length of the spring from *a* to *b*, for a purpose hereinafter shown. It will be noted that the springs extend from the bend G through the pipe B into the interior, which causes the bends or handles H to be on the inside of the pipe, as seen in Fig. 2.

The apparatus may be connected to the ceiling I over the burner by making a hole through it to receive the pipe B and then pushing the pipe through the opening. On passing the pipe through the opening the sections of the springs on each side of the pipe are forced into the recesses or grooves in the pipe before mentioned, and when the pipe has been extended through the ceiling so that the springs are above the lath, then the springs, by recoil, will move out to the position shown in Fig. 2. Thus the smoke-bell will be held in position by means of the springs having a support above the ceiling.

To remove the apparatus it is only required

to compress the springs by moving the handles at H, so that the outside portion of the spring will be drawn in to allow the pipe B to pass through the opening. In attaching and removing the bell the action of the spring is the same.

In place of attaching the apparatus directly to the ceiling, as before described, an ornamental flange or plate may be provided with an opening to receive the pipe B and the springs, which may rest upon the upper side of the flange in the same way substantially as though supported by the ceiling I, Fig. 2.

The flange may be secured to the ceiling and the apparatus removed therefrom in the same way as before shown.

The method of attaching and removing the apparatus is susceptible of modification without departing from its essential construction.

The smoke-bell may be also constructed to form a reflector and ventilator combined without impairing its function of conveying off the smoke, heat, &c., from the burner.

It is well known that with the means usually employed to prevent the ceiling from becoming injured and blackened by the smoke and products of combustion from both gas and oil burners a large amount of heat and odor is generated, which at certain times renders a room very uncomfortable. The object of this improvement is to remove these unpleasant and injurious results.

The pipe or conduit C may be connected with the pipe B by extending the latter through the ceiling and into an opening in the said conduit.

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

An improvement in smoke-bells, consisting of the bell A, provided with the pipe B, having depressions G′ in the sides thereof, the spring E, provided with arms D, passing through the sides of the pipe in alignment with the depressions therein, and into which said arms are compressed to allow the pipe B to pass freely through the ceiling for attachment thereto, constructed substantially as described, and for the purpose specified.

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

ADOLPHUS C. KENDEL.

Witnesses:
CHARLES I. DENGLER,
J. H. BURRIDGE.