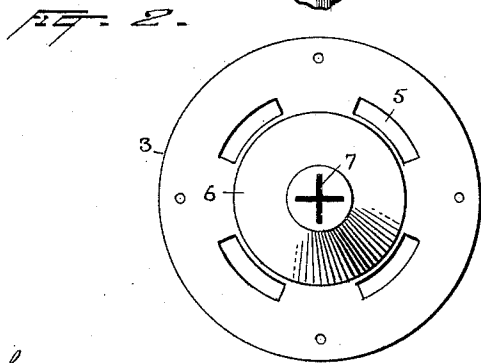
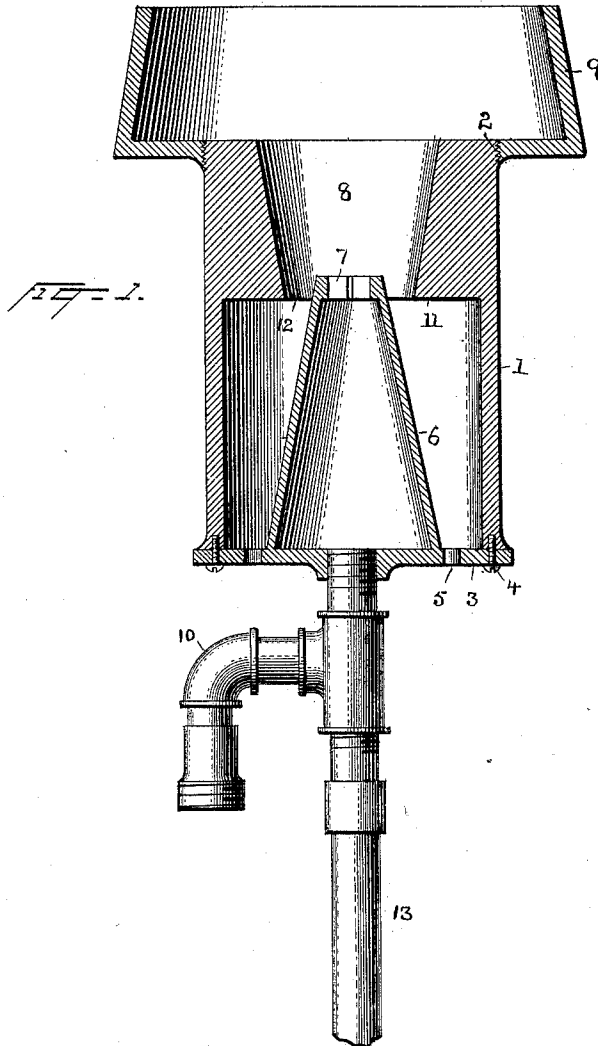


(No Model.)

T. BURKE.
FLUE CLEANER.

No. 465,590.

Patented Dec. 22, 1891.



Witnesses
J. L. Clark.
H. F. Clark.

Inventor
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By his Attorney
Morris A. Clark.

UNITED STATES PATENT OFFICE.

THOMAS BURKE, OF FORDHAM, NEW YORK.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 465,590, dated December 22, 1891.

Application filed July 22, 1891. Serial No. 400,274. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BURKE, a citizen of the United States, and a resident of Fordham, county and State of New York, have invented a certain new and useful Improvement in Flue-Cleaners, of which the following is a specification.

The present invention relates to devices known as "portable flue-cleaners" of that class in which steam and air are forced through the flue for the purpose of driving out material collected therein.

The main object of my invention is to provide a simple and effective cleaner of this character which shall enable me to use a large amount of air with the steam without condensing the latter.

In the accompanying drawings, illustrating the improved device, Figure 1 is a central section thereof; and Fig. 2 is an end view of the cap, looking from the left.

The entire device is preferably made of cast metal. I make it in several parts—viz., the main body 1, provided at one end with a screw-thread 2 and at the opposite end with screw-holes. On said opposite end is secured an end plate 3 by means of the screws 4. This plate is provided with one or more holes 5. The end plate is also provided on its rear side with a conical extension 6, having a X-shaped opening 7, communicating with the space 8, which, when the apparatus is in use, communicates directly with the flue to be cleaned, connection being made by means of the beveled head 9, adapted to fit into the flue and to form a tight connection therewith, said head being connected to the body 1 by means of the screw-thread, as shown. It will be evident that this head can be removed and one of smaller or greater size substituted to accommodate flues of different sizes. The end plate 3 is provided with a pipe connection 10, by means of which steam under pressure may be driven through the central chamber or passage of the cleaner and into the flue. As steam passes through the contracted opening 7 at a high velocity it draws air in through the openings 5. This air is brought into contact with the

wall of the conical chamber 6, and is retarded and held in contact with said chamber to some extent by the shoulder 11, which stands directly in front of the opening 5 on the inner side of the body 1. The effect of this is that the air is warmed or heated before it passes through the annular opening 12 to be mingled with the steam which passes into the flue in a manner heretofore known. Since the air is heated, as just described, it will not cause a condensation of the steam, as is the case with flue-cleaners of this character, which do not provide means for heating the air, and it is evident that this is important, since the deposition of moisture causes the soot in the flues to adhere and thus to prevent its removal by the blast.

13 is a handle, of wood or other poor conductor of heat, by means of which the cleaner can be conveniently applied to the flues to be cleaned.

What I claim is—

1. The combination, in a flue-cleaner, of a body having an opening or chamber through it and having the interior shoulder 11, a plate having an air-hole or air-holes in it closing one end of said chamber, said plate also having a central opening for a steam-pipe and a conical inner extension on said plate around the steam-opening, substantially as described.

2. The combination, in a flue-cleaner, of a body having an opening through it and having an external screw-thread at one end, a plate having an air-hole or air-holes in it closing the opposite end of said opening, said plate also having a central opening for a steam-pipe, and an inner extension on said plate around the steam-opening and extending nearly through said body, whereby a heating-chamber is formed around said inner extension, substantially as described.

This specification signed and witnessed this 18th day of July, 1891.

THOMAS BURKE.

Witnesses:

ISAAC ANDERSON,
EDWD. P. STEERS.