H. J. TRAUTMANN & J. L. COPPING.

DEVICE FOR VARYING CHIMNEY DRAFTS.

APPLICATION FILED DEC. 22, 1908.

957,273.

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Fig. 1

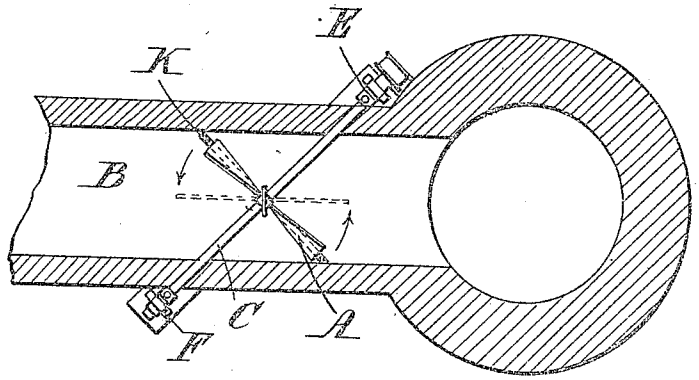
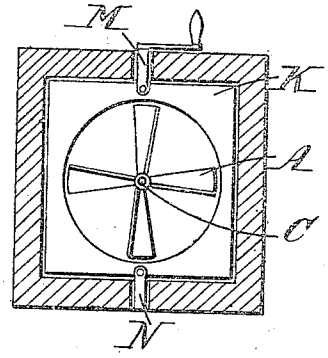


Fig. 2.



Witnesses:
M. H. Darg
L. A. Pike

Inventors:
Henry J. Trautmann,
James L. Copping
By Wm. E. Boulter, attorney

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY JULIUS TRAUTMANN AND JAMES LLOYD COPPING, OF LONDON, ENGLAND.

DEVICE FOR VARYING CHIMNEY-DRAFTS.

957,273. Specification of Letters Patent. Patented May 10, 1910.

Application filed December 22, 1908. Serial No. 468,822.

To all whom it may concern:

Be it known that we, HENRY JULIUS TRAUTMANN and JAMES LLOYD COPPING, subjects of the King of England, residing at London, England, have invented certain new and useful Improvements in Devices for Varying Chimney-Drafts, of which the following is a specification.

This invention relates to improvements in devices for varying chimney drafts.

It is found that in devices of this description the most suitable construction is one in which the flue or duct remains unaltered and the direction of the passage of the flue gases is changed as little as possible. Methods are known for protecting the bearings of fans used in smoke flues, against the action of the hot gases and at the same time to make them accessible for adjustment and lubrication.

According to this invention a ventilating fan is fixed in a slanting direction across the smoke flue or connecting duct from the fire to the chimney. A throttling or damper plate may be provided. It has a circular opening and may be fixed or may be capable of rotation from a plane parallel with the axis of the flue into the plane of the fan. When the fan is not at work the throttling plate if movable is turned into the central line of the flue or duct, while when the fan is working the movable plate is turned into the plane of the fan, so as to fill the clearance which previously existed around the fan.

In the accompanying drawings in which like letters indicate like parts—Figure 1 is a longitudinal section of the device, and Fig. 2 is a cross section.

A fan A is fixed directly in the smoke flue B or in the connecting duct from the fire to the chimney, in a slanting direction from the central line of the duct, in such a way that the necessary draft can be obtained by means of the fan without any considerable deviation in the direction of the passage of the gases. The fan A is mounted on a spindle C and bearings E F are provided. Said fan is adapted to be rotated from any suitable external source of power.

The two spindle ends are taken to the outside through tubes, or in any other suitable manner, through the walls of the duct and the bearings E F are fixed in the usual manner outside the walls of the duct so that they do not come in contact with the flue gases.

Surrounding the fan there is provided a throttling or damper plate K. This plate is provided with a circular opening and can be revolved upon the spindles M and N whereby a corresponding adjustment of the section of the duct is rendered possible.

When the fan is not working the plate K is turned into the central line of the duct as indicated in dotted lines in Fig. 1. Thus the whole section of the duct and in particular the passage which lies between the periphery of the fan and the walls of the duct, is free.

When the fan is at work the plate K is turned into the plane of the fan as shown by the full lines in Fig. 1. Thus the part around the fan periphery and in the corners of the duct, is covered, so that now the fan can work properly and by its speed a regulation of the draft is rendered possible.

By turning the plate K more or less from the horizontal position into the plane of the fan the free space for the passage of the smoke will be varied and thus the draft through the flue will be more or less affected.

The device shown above is particularly suitable where water or air heating pipes are placed in the flues because the difference in the intensity of the draft can be regulated at will.

What we claim as our invention and desire to secure by Letters Patent is:—

1. The combination with a smoke flue of a rotatable ventilating fan arranged therein in a fixed slanting direction relatively to the central line of the flue, and a throttling plate also arranged within the flue and having a circular opening and adapted to surround the fan.

2. The combination with a smoke flue, of a rotatable ventilating fan arranged therein in a fixed slanting direction relatively to the central line of the flue, and a rotatable throttling plate pivotally mounted in the smoke flue and having a circular opening and adapted to be turned into the plane of the fan.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY JULIUS TRAUTMANN.
JAMES LLOYD COPPING.

Witnesses:
WILLIAM A. PATERSON,
WALTER DIETZ.