

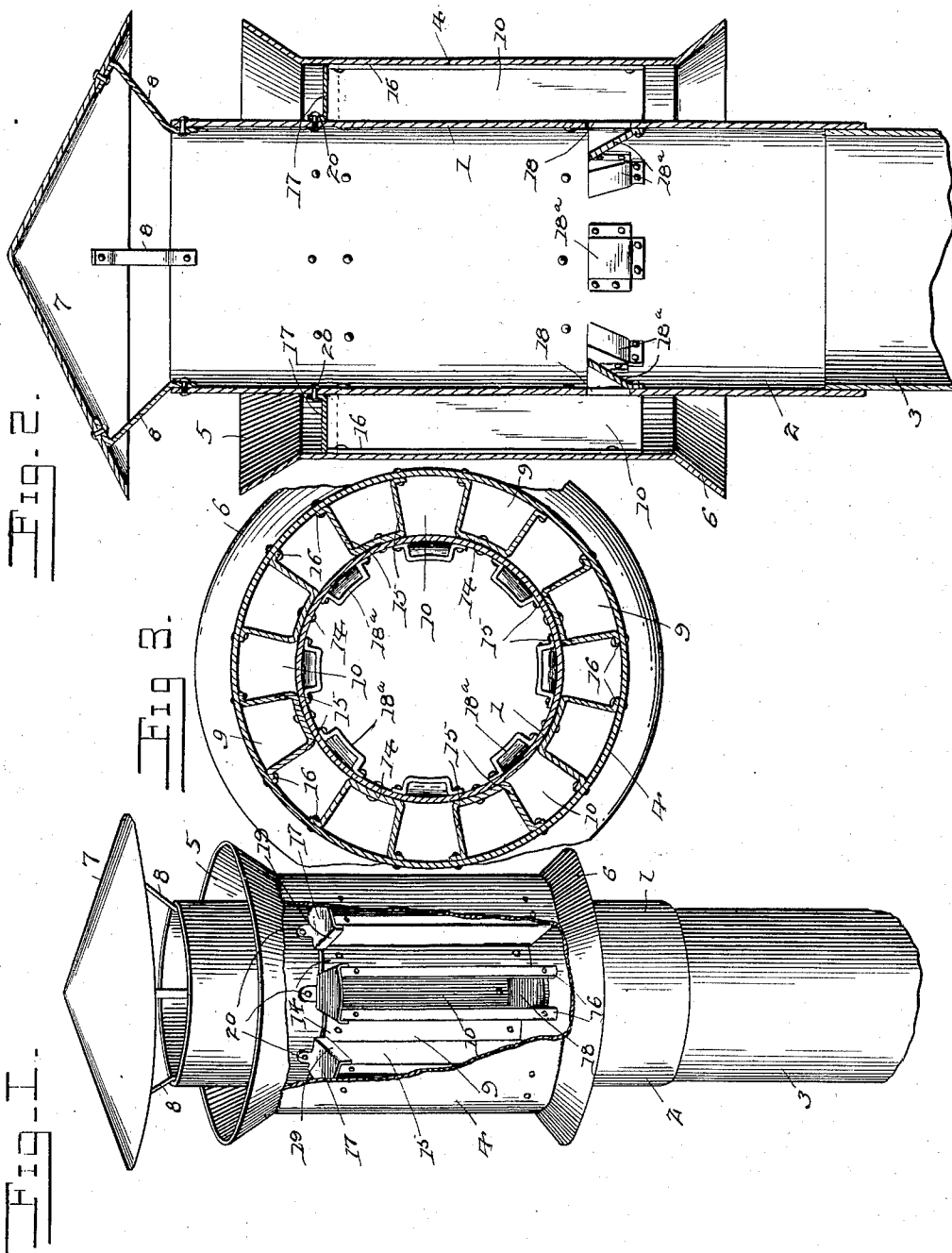
No. 653,097.

Patented July 3, 1900.

E. KREUTZBERG.
VENTILATOR FOR CHIMNEYS.

(Application filed Mar. 21, 1900.)

(No Model.)



Witnesses
F. C. Alden.
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UNITED STATES PATENT OFFICE.

ERNST KREUTZBERG, OF MARINE, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOHN H. BRANDES, JR., OF SAME PLACE.

VENTILATOR FOR CHIMNEYS.

SPECIFICATION forming part of Letters Patent No. 653,097, dated July 3, 1900.

Application filed March 21, 1900. Serial No. 9,598. (No model.)

To all whom it may concern:

Be it known that I, ERNST KREUTZBERG, a citizen of the United States, residing at Marine, in the county of Madison and State of Illinois, have invented a new and useful Ventilator for Chimneys, of which the following is a specification.

The invention relates to improvements in ventilators for chimneys.

The object of the present invention is to improve the construction of ventilators for chimneys and to provide a simple, inexpensive, and efficient device adapted to effectually prevent the downdraft of a chimney from interfering with the exit of smoke and choking the draft and capable of producing an effective upward tendency or draft in the chimney.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a ventilator for chimneys constructed in accordance with this invention, a portion of the outer casing being broken away to illustrate the arrangement of the annular series of flues or passages. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an inner casing or pipe designed to be constructed of sections 2 and 3, as illustrated in Figs. 1 and 2 of the drawings, and extending through and projecting beyond an outer casing 4, which is cylindrical. The outer casing 4, which is spaced from the inner casing or pipe, is provided at its upper and lower ends with inclined outwardly-extending flanges or portions 5 and 6, forming flaring mouths or entrances to increase the volume of air passing through the spaces between the inner and outer casings, and the upper flange may be scalloped or otherwise ornamented, if desired. The inner casing or pipe forms a continuation of the chimney proper, and a tapering cap is supported above the same by braces 8 to protect the device and to

prevent rain or the like from beating down the chimney.

The annular intervening space between the inner and outer casings is divided into vertical spaces or flues 9 and 10 by metallic boxes 11, and these flues or passages 9 and 10 are alternately open and closed to permit air to pass directly through the intervening space between the inner and outer casings and also to cause air to pass from such intervening space into the inner casing or pipe at a point below the top of the same, whereby the upward draft or tendency of the products of combustion to escape from the chimney will be increased. Each metallic box consists of an inner wall or back 14 and side walls 15, the inner wall or back 14 being secured by rivets or other suitable fastening devices to the inner casing or pipe, and the sides 15, which form approximately-radial partitions, extend outward from the back or inner wall to the inner face of the outer casing and are provided thereat with laterally-projecting flanges 16, which are riveted or otherwise secured to the outer casing and which support the same in the position shown in Figs. 1 and 2.

The passages or spaces inclosed by the boxes are open at the top and bottom to permit air to pass through them in either direction, and the spaces or passages between the boxes are closed at the top by caps 17 to cause air to pass through an annular series of apertures 18 of the inner casing or pipe. The apertures are located near the lower ends of the passages or spaces 10, as clearly shown in Figs. 1 and 2, and the inner casing or pipe is provided at its interior with an annular series of guards 18^a, located at the said apertures 18. The caps 17, which are disposed horizontally, connect the sides 15 of the adjacent boxes and are provided with depending side flanges 19, which are riveted or otherwise secured to the inner faces of the sides 15. The caps are provided at their inner ends with upwardly-extending lips or tongues 20, which are riveted or otherwise secured to the inner casing or pipe.

The guards or shields 18^a, which are arranged on the interior of the inner casing or pipe, taper downwardly, being provided with inclined inner walls and tapering side walls,

and these walls, as clearly shown in Fig. 2, are preferably flanged and riveted to the inner casing or pipe. The guards or shields 18^a deflect the smoke and other products of combustion from the apertures 18, preventing the same from choking up the apertures 18 and causing the products of combustion to create a suction to produce a draft or circulation through the apertures, whereby the upward draft in the chimney is increased. The direction of the wind blowing around the ventilator changes suddenly, blowing first in one direction and then in another, and the exit of the smoke and other products of combustion from the inner casing will cause the air surrounding the upper edges of the inner casing to pass downward through the intervening spaces or passages 9, between the inner and outer casings, and there will be no tendency of such air to pass down the inner casing or chimney proper. Air blowing into the bottom of the outer casing will pass upward through the same and also into and upward through the upper portion of the inner casing, which will result in an increased draft. Also the heat from the products of combustion will cause the air between the inner and outer casings to become heated and to ascend, such air passing upward through the open passages 9 and through the apertures 18 at the lower ends of the closed passages 10. By this construction an effective draft within the inner casing is produced and the outside air is prevented from choking the inner casing or interfering with the escape of the products of combustion.

The intervening passages or spaces between the inner and outer casings are alternately open and closed, and they extend entirely around the inner casing and are adapted to be operated on by the wind when blowing from any quarter.

It will be seen that the ventilator for chimneys is exceedingly simple and inexpensive in construction and that it is adapted to increase the draft of a chimney and is capable of effectually preventing the latter from becoming choked.

What is claimed is--

1. A device of the class described compris-

ing inner and outer casings spaced apart, the space between the inner and outer casings being divided into a series of open and closed vertical passages, the said inner casing being provided at the lower ends of the closed passages with apertures, substantially as described.

2. A device of the class described comprising inner and outer casings spaced apart, the space between the inner and outer casings being divided into a series of vertical passages, the passages being alternately open and closed at their upper ends, and the inner casing being provided at the lower ends of the closed passages with apertures, substantially as described.

3. A device of the class described comprising an inner casing provided with apertures, an outer casing, a series of vertical partitions forming passages between the casings, caps arranged at intervals and closing the alternate passages, said caps being located directly above the apertures, substantially as described.

4. A device of the class described comprising an inner casing provided with apertures, an outer casing spaced from the inner casing, a series of vertical boxes located between the casings and at points between the said apertures, and caps located over the spaces between the boxes and connecting the adjacent sides of the same, substantially as described.

5. A device of the class described comprising an inner casing having apertures provided with interior guards arranged to deflect the smoke and other products of combustion from the said apertures, an outer casing spaced from the inner casing, an annular series of partitions arranged in the space between the casings, and the caps supported by the partitions and arranged at intervals to form closed passages at the said apertures, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERNST KREUTZBERG.

Witnesses:

WM. H. KREUTZBERG,
P. S. WEIDMAN.