

H. WISLICENUS.
CHIMNEY.
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988,920.

Patented Apr. 4, 1911.

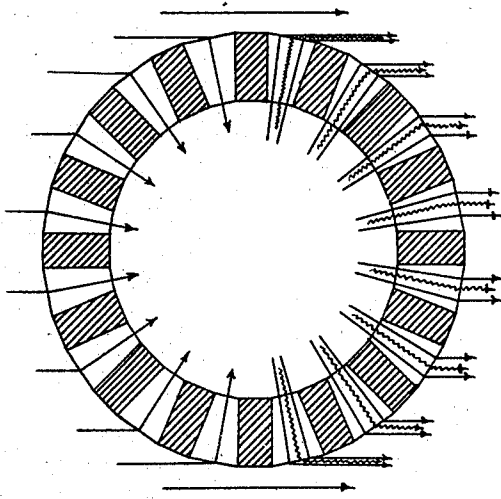


Fig. 1.

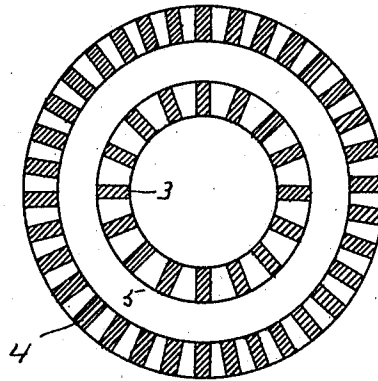


Fig. 3.

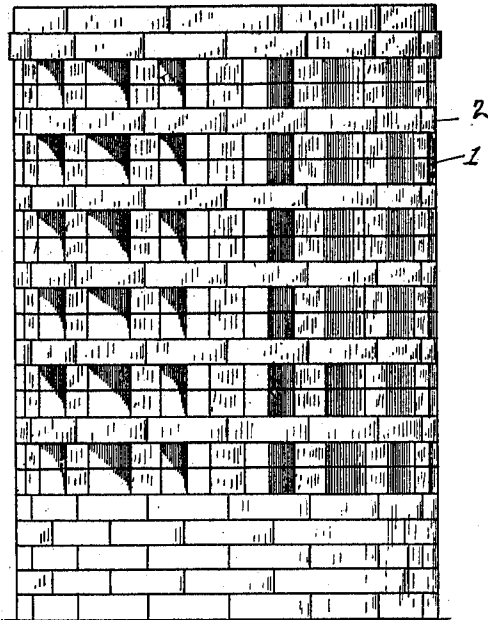


Fig. 2.

WITNESSES:

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HANS WISLICENUS, OF THARANDT, NEAR DRESDEN, GERMANY.

CHIMNEY.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HANS WISLICENUS, subject of the German Emperor, residing at Tharandt, near Dresden, Germany, have invented new and useful Improvements in Chimneys, of which the following is a specification.

The present invention relates to chimneys and an important object is to provide an improved chimney for rendering smoke and other waste gases non-injurious by mixing them intimately with air.

In accordance with the present invention the chimney-shaft is no longer formed as heretofore as a closed tubular shaft essentially for creating a draft, but, on the contrary, its principal part is perforated in a peculiar manner like a grate, and the closed shaft-portion is conducted somewhat over the roof, substantially only as a passive tubular conduit and as a pedestal for the grated shaft.

In order that the invention may be clearly understood, reference will be made to the accompanying drawing in which several embodiments are represented by way of example, and in which:

Figure 1 is a cross-section, and Fig. 2 a side elevation of one form of chimney, whereas Fig. 3 is a cross-section through a modified form.

Referring to the drawing, as is clearly shown in Figs. 1 and 2, the shaft of the chimney is formed like a grate by perforated layers and solid layers 2 being alternately built one over another by means of suitable bricks or flat stones in such manner that the total area of the outlets on the side turned away from the wind, namely at one half of the shaft, is at least equal to the upper cross-sectional area of the chimney flue.

The inlets and outlets are all directed about horizontally. They have ordinarily a parallelepipedonshaped or a trapezoidal form, and they are directed diametrically, to the axis or the sides of the chimney. Especially for round chimneys—as shown in the figures—they are preferably, but not absolutely necessarily, enlarged outwardly laterally trapezoidally for the maximum performance, in order that the air which enters in one direction attains in each opening a different speed, and the emitting mixture of air and waste gases is likewise expanded differently and is subjected to as great whirling motion and dilution as possible.

Figs. 1 and 2 show a constructional form having a round cross-section, the object in view being obtained most simply by means of the customary chimney bricks or ordinary building bricks which are parallelepipedons in shape. It follows from the nature of the invention that for other optional cross-sections corresponding suitable shapes of bricks are to be employed. In the chimney head-pieces used heretofore the conical openings of the head-piece or cap which are cut in or hollowed out of specially shaped stones or bricks have a special different shape and direction in accordance with the quite opposite purpose in view. As compared with the present invention they have heretofore been generally directed upward, and accordingly enlarge conically downward. Accordingly they guide the inflowing wind upward in the same direction with the waste gases, or tangentially to the mouth of the chimney. In the present case, on the contrary, in the wall of the shaft itself there are opposite to the inlets outlets of equal width, so that the incoming wind mixed with the gases can easily pass out again at different sides after the air and gases have been intimately mixed by being whirled energetically together. For the entering air mixes at very different velocities and in very different directions with the current of gases.

In Fig. 3 another constructional form is represented as an example of the possibility of manifolding or multiplying the principle, which for the sake of brevity will be denominated dissipater and multidissipater, or, simple and multiple diluter, (diluter, double diluter). In this case the concentric arrangement of a second grated shaft 3 around the first shaft 4 has a double effect; for in the annular intermediate space 5 between the two shafts air will again mix intensively with eddying motions with the primary mixture of air and waste gases. The primary mixture will then pass out into the atmosphere diluted at least twice as much, when the total area of the inlets and outlets is doubled in a natural manner by means of the double diameter of the exterior grate.

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

1. A chimney having a plurality of rows of circumferentially arranged, horizontally extending, apertures, said rows of apertures

being arranged one below the other in different horizontal planes, the apertures of each row lying in the same horizontal plane and forming transverse horizontal passages
5 through the chimney, said apertures being of such a size and extending downwardly in the body of the chimney to such a distance that the air can enter the chimney through the sides thereof and after mixing with the
10 chimney gases issue from the chimney through the sides thereof.

2. A chimney comprising outer and inner walls concentrically arranged, each of said walls having horizontal passages extending
15 transversely therethrough and positioned in the same horizontal plane so as to pro-

vide a horizontal path through the chimney for the air said passages being of such a size and extending downwardly in the body of the chimney to such a distance that the
20 air can enter the chimney through the sides thereof and after mixing with the chimney gases issue from the chimney through the sides thereof.

In testimony whereof I have signed my
25 name to this specification in the presence of two subscribing witnesses.

HANS WISLICENUS.

Witnesses:

PAUL ARRAS,
CLARE SIMON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
