

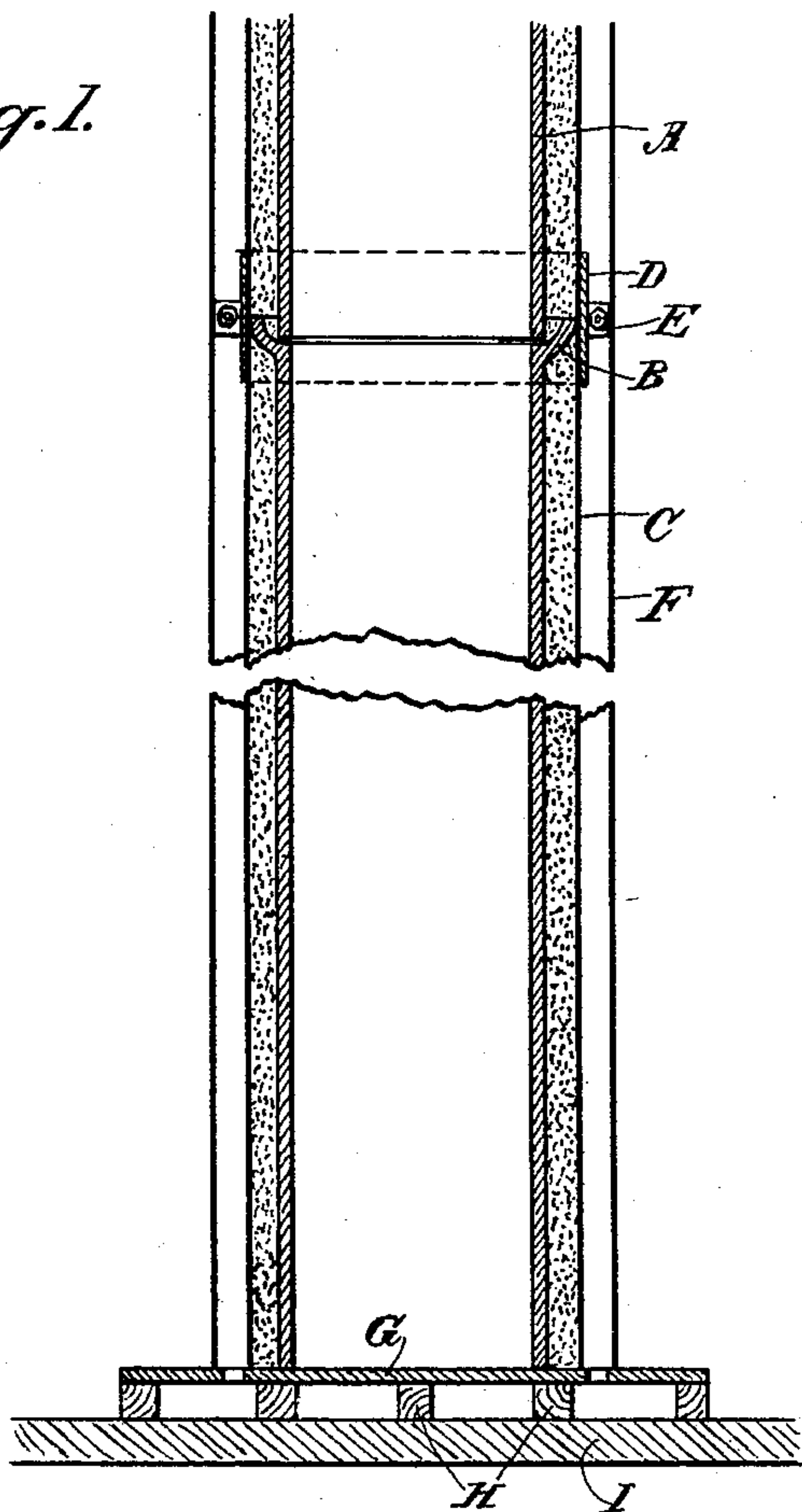
(No Model.)

L. E. CLAWSON.  
CONTINUOUS SECTIONAL CHIMNEY.

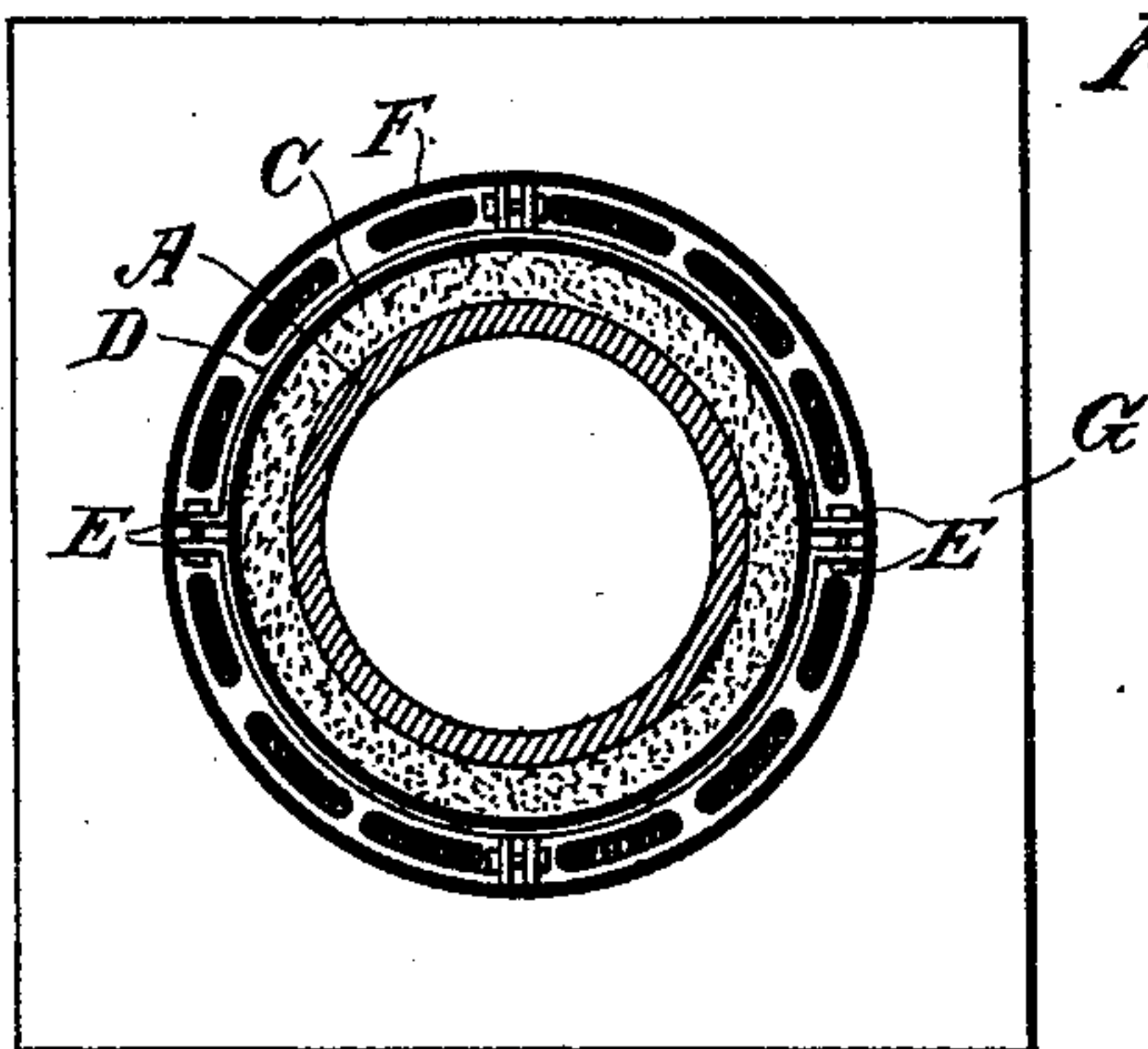
No. 435,557.

Patented Sept. 2, 1890.

*Fig. 1.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

LEONARD E. CLAWSON, OF SAN FRANCISCO, CALIFORNIA.

## CONTINUOUS SECTIONAL CHIMNEY.

SPECIFICATION forming part of Letters Patent No. 435,557, dated September 2, 1890.

Application filed April 29, 1890. Serial No. 349,956. (No model.)

*To all whom it may concern:*

Be it known that I, LEONARD E. CLAWSON, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Continuous Sectional Chimneys; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improved continuous sectional tube or chimney; and it consists in the combination of an inner tube, made in sections, of earthenware, having the adjacent ends made one with a flange and the other adapted to fit therein, an exterior sheet-metal tube of sufficient diameter to fit around the flanges of these joints, a filling of plastic material which will set and become hard, a band surrounding each joint and having lugs which form guides for a second exterior metal tube, which provides an air-space between the two.

It also consists in the base for the support of said chimney, raised so as to provide an air-space beneath this base and between the chimney and the floor upon which it rests.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view of my improved tube adapted for use as a chimney, showing the base and air-passages. Fig. 2 is a horizontal cross-section of the same.

In the construction of my chimney I employ short tubes or sections A, made of earthenware or pottery, each section being constructed with one end straight and the other end provided with the enlarged flange B, which is adapted to fit the straight end of the next adjacent section, the flange being of sufficient diameter to receive a filling of any suitable plastic compound which will set and become hard.

Around the exterior of the sections A is fitted a sheet-metal pipe or tube C of sufficient diameter to just fit around the flanges B, which serve as a guide to hold it approximately concentric with the inner earthenware tube. The space between this sheet-metal tube and the earthenware tube is filled with concrete or plastic material, which serves to make a solid binding between the metal tube C and the inner earthenware tube A. The same filling also enters into and fills the

space within the flanges, so as to make a perfectly solid and tight joint between the ends of the adjacent sections.

Around the exterior of the tube and at a point opposite each of the joints or meeting ends of the earthenware sections I fit a band D, which is preferably composed of two separate semicircular pieces having outwardly-projecting lugs E, with bolt-holes through which bolts are passed, said bolts serving to draw the bands tightly together around the outside of the sheet-metal tube C, and these bands serve to brace and strengthen the tube at this point so as to prevent the joints in the inner tube from cracking or separating.

In order to provide an air-space and prevent the tube becoming unduly hot when used as a chimney, I have shown a second sheet-metal tube F, which surrounds the metal tube C and is maintained concentric therewith by means of the flanges E of the band D. The two flanges of one of these bands will be set so as to stand approximately at right angles with the flanges of the next adjacent bands, and so on through the whole length of the tube or chimney, and by this construction these flanges maintain the outer tube at an equal distance from the inner tube throughout this length, and thus provide a suitable air-space between the two metal tubes.

G is a plate of any suitable material, but preferably of cast-iron, of sufficient size to serve as a base for the chimney. This plate is supported upon supports or sills H so as to stand a short distance above the floor I, upon which the chimney is built, it being customary to build these chimneys upon the floor from which it is desired that they should extend upward to the roof, instead of building them all the way up from the cellar or basement, as in the case of ordinary brick chimneys. The plate G may have holes or perforations around it corresponding with the air-space between the tubes C and F, so that a current and circulation of air may be admitted into this space, and the air also circulates freely underneath the plate G. This circulation beneath the plate is important, as it prevents its becoming dangerously heated, and also prevents any danger of setting the floor which supports the chimney on fire. This plate and air-space beneath is applicable to



any form of this class of chimneys. By this construction I produce a very rigid and permanent chimney of sufficient thickness, while having a surrounding air-space which keeps the exterior cool and makes the chimney perfectly safe. If desired, these tubes may also be used in a horizontal position for sewer and other purposes, for which they are extremely well adapted. In such cases the exterior metal tube F may be omitted, if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A chimney composed of the earthenware sections, having the ends formed alternately flanged and straight, so as to form joints, an exterior tube surrounding the inner earthenware one and concentric therewith, a filling of plastic material which will set and become hard, and exterior bands with lugs and bolts, whereby they may be drawn together and clamped upon the metal pipe outside of the joints of the inner earthenware tube, substantially as herein described.
2. A sectional chimney or tube consisting of the inner earthenware tube having the flanges at one end of each alternate section to receive the opposite end of the adjacent section, a metal tube concentric with the inner one and exterior thereto, with the space between the two, a filling of plastic material between the two tubes, and also within the

joint flanges of the inner one, a re-enforcing band fitted around the outside of the metal tube at each of the joints and bolts, whereby it may be drawn together, and a second metal tube exterior to the first-mentioned one maintained concentric therewith by the projecting flanges of the bands, said tube forming an air-space, substantially as herein described.

3. A sectional tubular chimney consisting of the earthenware sections having the flanged joints, a metal tube concentric with and exterior thereto, and a filling of plastic material which will set between the two, bands surrounding the metal tube at each of the joints of the inner tube and lugs and bolts whereby they are drawn together, an exterior concentric tube forming an air-space between the inner and outer concentric metal tubes, a plate upon which the tube is supported, having perforations connecting with the air-space of the outer tube, and sills or supports by which said plate is raised above the floor, so as to provide a space for the circulation of air beneath it, substantially as herein described.

In witness whereof I have hereunto set my hand.

LEONARD E. CLAWSON.

Witnesses:

S. H. NOURSE,  
H. C. LEE.