

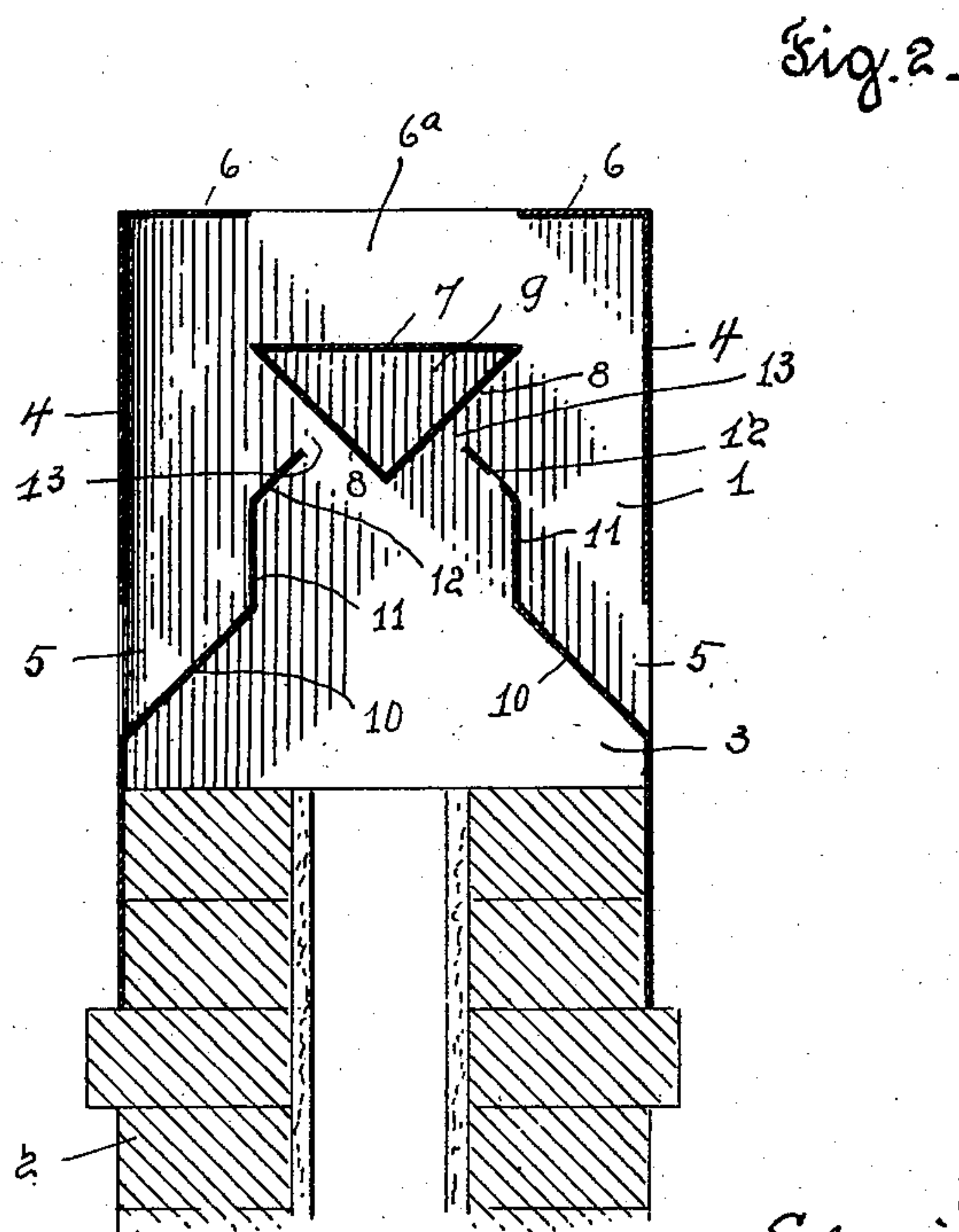
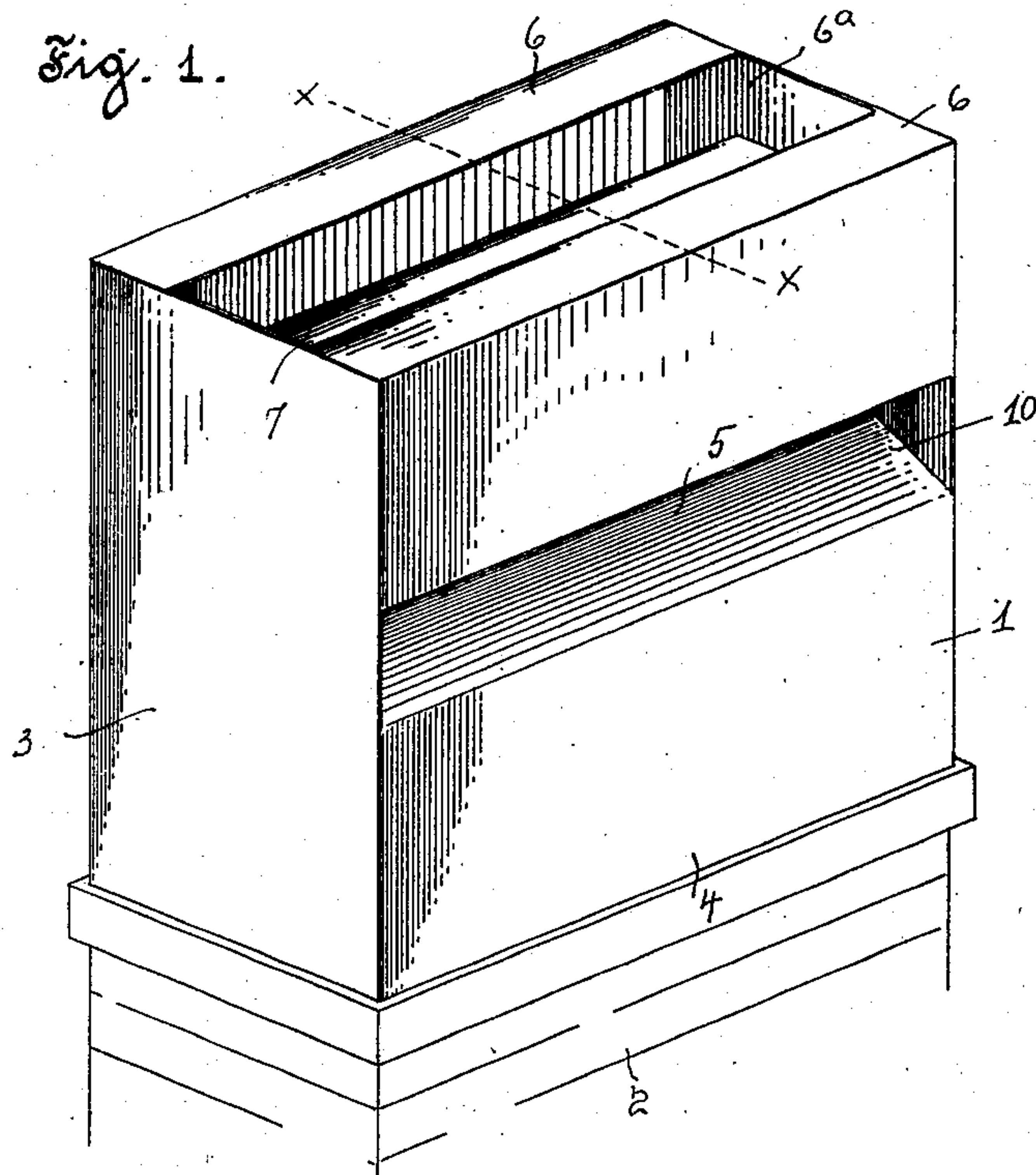
No. 744,570.

PATENTED NOV. 17, 1903.

E. H. LE BEAU.
CHIMNEY TOP.

APPLICATION FILED DEC. 5, 1902.

NO MODEL.



witnesses-
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UNITED STATES PATENT OFFICE.

EDWIN H. LE BEAU, OF TOLEDO, OHIO.

CHIMNEY-TOP.

SPECIFICATION forming part of Letters Patent No. 744,570, dated November 17, 1903.

Application filed December 5, 1902. Serial No. 134,007. (No model.)

To all whom it may concern:

Be it known that I, EDWIN H. LE BEAU, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
 5 invented a new and useful Improvement in Chimney-Tops, of which the following is a specification.

My invention relates to a chimney-top, and has for its object to provide a device of the
 10 kind that is simple and economical in construction and effective to prevent downdrafts without diminishing the updraft of the chimney. I accomplish these objects by the construction and combination of parts, as here-
 15 inafter described, and illustrated in the drawings, in which—

Figure 1 is an isometric view of my invention, and Fig. 2 is a section through the same on line X X of Fig. 1.

20 In the drawings, 1 designates a rectangular shell of sheet metal which forms the body of my chimney-top. The shell is open at the lower end and adapted to telescope over the top of a chimney 2, as shown in Fig. 2, and
 25 the walls of the shell extend above the top of the chimney a distance not less than the width of an end wall 3. In each of the side walls 4 of the shell there is provided a rectangular draft-opening 5, extending from end wall to
 30 end wall. Openings 5 are so located that their lower edges are each at a distance below the top of the shell equal to the width of an end wall 3 and of a vertical width equal to one-fourth of such distance, the width of an end
 35 wall 3 in the construction of my invention always determining the location of the lower edges of the side openings and the vertical width of each side opening being always equal to one-fourth of the width of an end wall of
 40 the shell. Across the top end of the shell at each side are provided cover-plates 6, extending across the top from end wall to end wall, which each cover one-fourth the area of the top, leaving the central one-half portion 6^a
 45 open. Below and parallel with the top opening is provided a plate 7, of equal area as the top opening and extending from end wall to end wall, and from the side edges of plate 7, at an angle of forty-five degrees, extend plates
 50 8, forming with the plate 7 a deflecting-body 9, which in cross-section is in the form of a right-angled triangle. Within the shell are

also provided the deflecting-plates 10, extending from end wall to end wall, the central portions 11 of which are parallel with the sides
 55 4 and in the same vertical planes with the side edges of plate 7 and the inner edges of the top plates 6. The lower portions of plates 10 extend downward and outward from the central portions at an angle of forty-five de-
 60 grees to a junction with the side walls 4 along the lower edges of the openings 5. The upper portions 12 of the plates 10 are angled inward and upward, preferably also at an angle of forty-five degrees, the angles being pref-
 65 erably in the same horizontal plane with the angle formed by the junction of the plates 8 and are of a width to extend three-fourths the distance between the angles and the hori-
 70 zontal center lines of the latter plates and at right angles thereto, thereby forming the up-draft-openings 13 between the plates 8 and the upper edges of the plates 10.

Thus constructed it is manifest that wind-currents blowing down through the chimney-
 75 top will be deflected by the plate 7 outward and downward along the sides 4 and by the plates 10 through the openings 5 and that such downdraft will create a suction that will increase the updraft through the openings 13,
 80 the discharge of the chimney-gases being during such down-currents from the side openings 5. Where the wind-currents are horizontal against either side wall of the chim-
 85 ney-top, whether from direct or diagonal directions, the air passing through the openings 5 on the side toward the wind will be deflected upward by plates 10 and 11 along the side 4 and out of the top opening, or if the current
 90 across the top opening is strong enough to prevent its exit from the top it will pass over the top of plate 7 and thence down the opposite side 4 and out of opening 5 on that side, producing a suction through one or both
 95 openings 13 that will likewise aid the natural draft of the chimney. A horizontal current against either of the walls 3 and over the top of the chimney from either of said directions will be eddied in curves around the sides 4 and over the top that will likewise create a
 100 suction from both the top and side openings of the shell. When the air is still, it is manifest also that the deflector 9 offers little, if any, resistance to the updraft of the chimney

through the openings 13, which have a capacity substantially equal to the chimney-flue. It will thus be seen that from whatever direction the wind may blow by the construction 5 shown it is made to increase rather than diminish the natural draft of the chimney and that this result is accomplished by so locating and proportioning the openings and deflector-plates and setting the deflector-plates at such 10 angles to the openings to the sides and to each other that while offering no obstruction to the natural updraft of the heated gases they deflect the air-currents, from whatever direction they may come, past the updraft- 15 openings 13.

What I claim to be new is—

In a chimney-top, a rectangular shell arranged to extend the chimney, side top plates of equal width, extending from end wall to 20 end wall, forming a top opening extending from end wall to end wall, said top opening having a width equal to one-half of the width of the top of the shell, a rectangular opening in each side wall of the shell extending from 25 end wall to end wall, the lower edge of each side opening being located a distance below the top of the shell equal to the width of an end wall, and the vertical width of each side opening being equal to one-fourth of such distance, a deflector-body located within the 30 shell and extending from end wall to end wall, comprising a top deflector-plate of equal

width with the top opening, said top plate of the deflector-body being disposed horizontal and located below the top opening a distance 35 equal to one-half its width, and two equal deflector-plates inclined inward and downward at an angle of forty-five degrees from the edges of the top deflector-plate and forming therewith a triangular body, a cross-section of which 40 is a right-angle triangle, a deflector-plate for each side opening extending from end wall to end wall of the shell, each side deflector-plate having a lower portion inclined upward and inward at an angle of forty-five degrees from 45 the lower edge of a side opening, a central portion extending vertical parallel with the sides of the shell in the vertical plane of the inner edge of a side top plate to a horizontal plane equidistant between the top of the shell and 50 a horizontal plane through the lower edges of the side openings, and an upper portion extending inward and upward at an angle of forty-five degrees from the top of the central portion three-fourths of the distance to the 55 adjacent lower plate of the deflector-body, and at a right angle thereto, as set forth.

In witness whereof I have hereunto set my hand this 22d day of November, A. D. 1902.

EDWIN H. LE BEAU.

Witnesses:

F. S. MACOMBE,
S. V. MACOMBE.