May 17, 1949. J. W. KICE 2,470,623

VENTILATOR CAP

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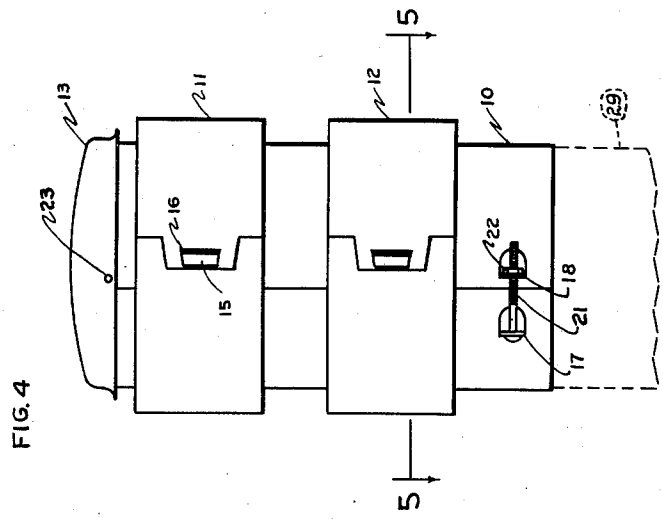

FIG. 4

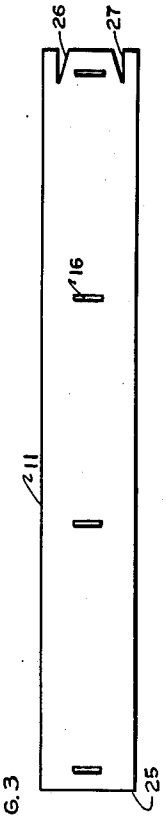

FIG. 3

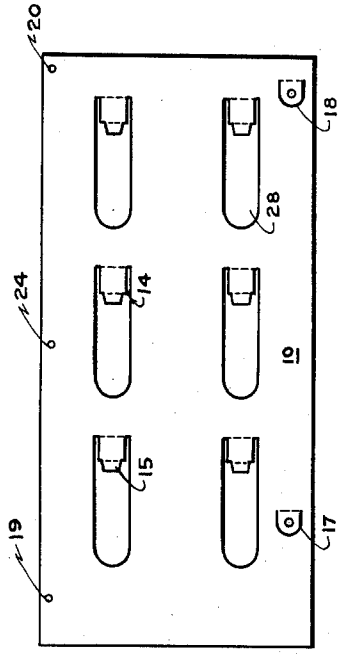

FIG. 1

FIG 2

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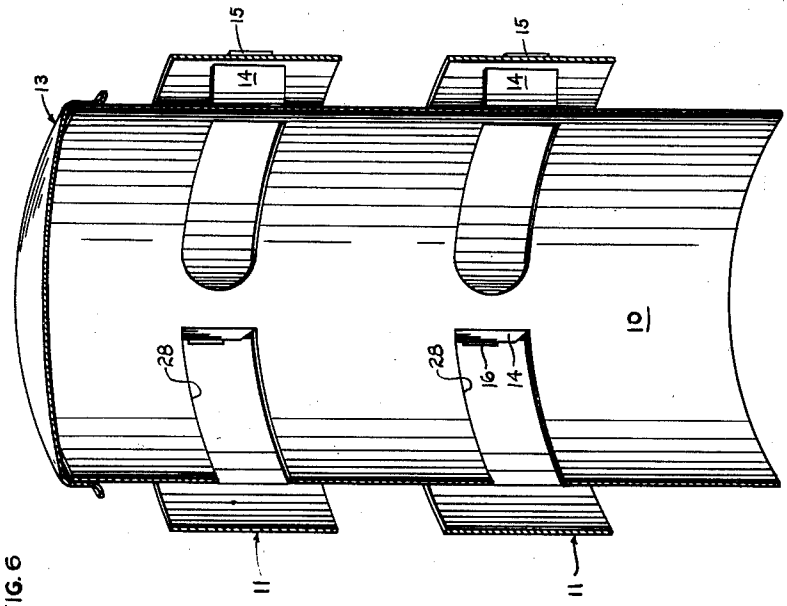

FIG. 6

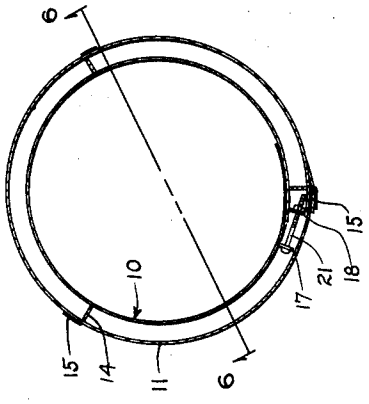

FIG. 5

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2,470,623

VENTILATOR CAP

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Application July 11, 1947, Serial No. 760,480

2 Claims. (Cl. 98—66)

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This invention relates to ventilators for installation on the exterior ends of vertical ventilating pipes. The particular invention which is the subject of this application will be referred to herein as a vent cap.

It is the chief object of the invention to provide a highly simplified and low cost construction for a highly efficient vent cap.

It is an additional object of the invention to provide a vent cap which is particularly adapted for use in connection with a gas burning heating unit.

It is another object of the invention to provide a vent cap which will positively prevent a gust of wind from entering the upper end ofthe ventilating pipe and passing downward through pipe to put out the gas burner flame, thus endangering the lives of the occupants of the building.

The details in the construction of a preferred form of the invention, together with other objects, will be better understood from the following description when it is read in connection with the accompanying drawings, which were chosen for illustrative purposes only, and in which:

Figure 1 is a flat pattern of the main body of a preferred form of vent cap embodying the invention;

Figure 2 is a side view of this body showing certain of its parts bent into assembly position;

Figure 3 is a flat pattern of a shield which is a part of the assembled vent cap;

Figure 4 is a side view of an assembled vent cap embodying the invention;

Figure 5 is a horizontal sectional view taken along the line 5—5 of Figure 4; and

Figure 6 is an isometric view of one-half of the vent cap of Figure 4, the cut being made along the line 6—6 of Figure 5.

Referring to the drawings it will be seen that the vent cap, shown assembled, in Figure 4, includes only 4 primary parts, i. e., a cylindrical shell or body 10, two identical cylindrical shields 11 and 12, somewhat larger in diameter than the body 10, and a dished cap 13.

The body 10 is stamped from a flat sheet of metal as shown in Figures 1 and 2. Cuts are made along the solid lines of Figure 1, and bends are subsequently made along the broken lines, as shown in Figure 2. The same is true of the shields 11 and 12, a flat pattern of which is shown in Figure 3. Shield supporting brackets 14 are spaced radially so that their tongues 15 may be inserted into the slots 16 of the shields 11 and 12, as shown clearly in Figure 5. The perforated ears 17 and 18, and the perforations 19 and 20 serve as the means for holding the body 10 in cylindrical form. The cap 13 is formed by means of a draw die from a flat sheet.

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To assemble the vent cap the blank stamped body 10 is manually bent into cylindrical form with ends overlapped, and a bolt 21 is inserted through the perforations in the ears 17 and 18. A nut 22 is then screwed loosely on the bolt. The cap 13 is then placed in position on the upper end of the cylindrical body, and a metal screw 23 is screwed into a perforation in the side wall of the cap and through the perforations 19 and 20, thus serving to hold the upper end of the body in fixed form while simultaneously aiding in anchoring the cap 13 in position. An additional metal screw (not shown) passes through another perforation in the side wall of the cap 13 and through the perforation 24 in the body 10 to complete anchorage of the cap.

Next, the shields 11 and 12 are manually bent into cylindrical form with their ends overlapping slightly, the plain end 25 passing into the spaced open slots 26 and 27 of the other end, as clearly shown in Figures 4 and 5. The tongues 15 of the brackets 14 are inserted into the slots 16 as the shields are bent into form, and the protruding ends of the tongues 15 are then bent to lie along the outer surface of each shield, as shown. Each shield is thus anchored to its respective brackets 14, and is in turn held by the brackets in spaced radial relation to the body 10, and in a position to block the entry of wind gusts into the vent openings 28. Since assembly of this vent cap is very easy, requiring no tools save a screw driver, it may be shipped disassembled if desired, and subsequently assembled either by the dealer, or by the one who installs it.

To install the assembled vent cap, it is only necessary to slip the lower end of the body 10 over a ventilator pipe 29, and then tighten the nut 22, the lower end of the body 10 thus acting as a clamp to hold the entire vent cap rigidly in place.

In operation, fumes passing upward through the vent pipe 29 are free to emerge through the shielded vent openings 28 and into the atmosphere through the space between the shields 11 and 12 and the body 10. Regardless of the direction of exterior wind or wind gusts, it is not possible for wind to blow downward into the pipe 29. Nor can upward or downward gusts passing through the space between the shields and the body 10 prevent fumes from emerging through the vent openings 28. In fact, such gusts actu-

ally aid the escape of fumes by creating an outward draft through these vent openings.

Having described a preferred embodiment of the invention, what I desire to claim and to protect by Letters Patent, is:

1. A vent cap comprising: an inner shell formed by bending a flat sheet of material into substantially cylindrical form with the ends of the sheet over-lapped; a cap closing one end of the formed shell and adapted to aid in holding the ends of the sheet in overlapped relation; perforated outwardly projecting ears, one cut from each overlapped end of the sheet; a bolt through the perforations in said ears; a nut on the bolt for rigidly clamping the open end of said shell in operating position on the open end of a vent pipe; circumferentially spaced outwardly projecting brackets cut from the material of said sheet; a vent opening in the shell between each adjacent pair of said brackets; and a shield for said vent openings supported in spaced concentric relation to the inner shell by the outer ends of said brackets, said shield also being formed by bending a flat sheet of material into substantially cylindrical form with the ends of the sheet overlapped, and having perforations for receiving the outer ends of said brackets, at least one of said brackets having its outer end passed through the overlapped ends of the shield.

2. A vent cap comprising: an inner shell formed from a flat sheet of material bent into

cylindrical form with its ends overlapped; a cap closing one end of said inner shell and adapted to aid in holding the ends of the sheet in overlapped relation; means for selectively varying the degree of overlap of the ends of the sheet material at the opposite end of said inner shell; circumferentially spaced brackets projecting outwardly from said inner shell; a vent opening in the shell between each adjacent pair of said brackets; and a shield for said vent openings supported in spaced concentric relation to the inner shell by the outer ends of said brackets, said shield also being formed by bending a flat sheet of material into substantially cylindrical form with the ends of the sheet overlapped, and having perforations for receiving the outer ends of said brackets, at least one of said brackets having its outer end passed through the overlapped ends of the shield.

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