Feb. 24, 1942. A. J. FILKINS 2,274,403

CHIMNEY

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Fig. 1.

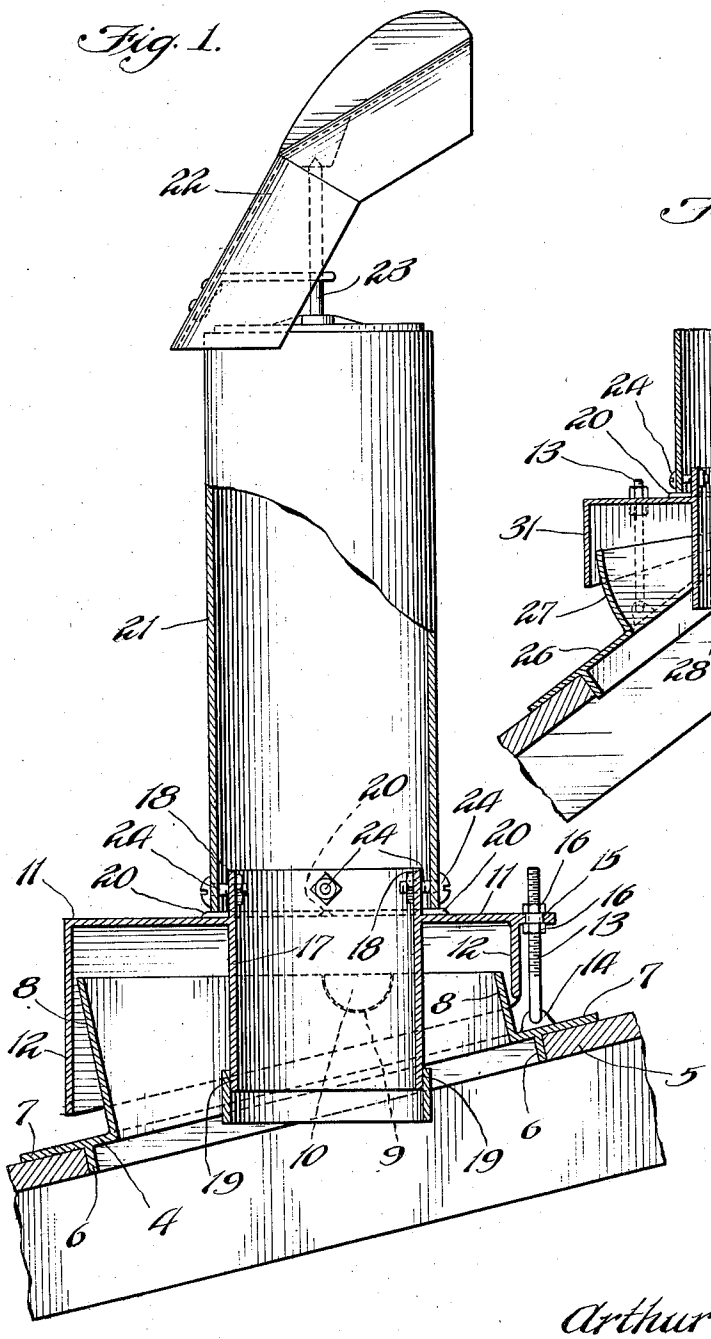
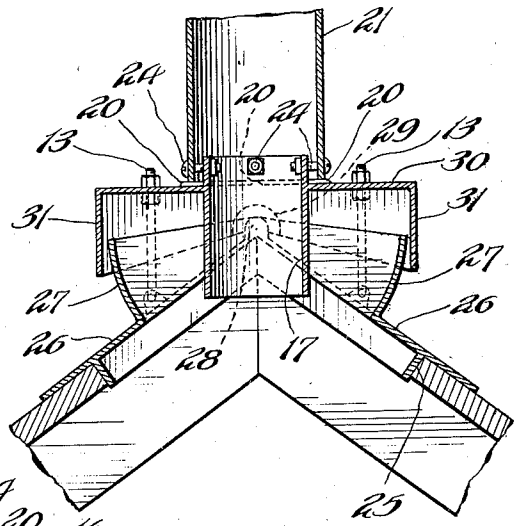


Fig. 2.



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CHIMNEY

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3 Claims. (Cl. 98—60)

This invention relates in general to a chimney, ventilator, or exhaust head for a slope or ridge installation adapted to fit any pitch or slope of roof.

An important object of the invention is in the provision of a structure in which an outlet is provided for a liquid which condenses on the inner wall of the pipe or for any liquid which may enter and run down the inner surface of the outer exposed portion of a chimney.

A further object of the invention is in the provision of the chimney structure in which the roof-plate forms its own flashing and spaces the chimney from the edges of the roof opening to provide for fire protection.

A still further object of the invention is in the provision of a chimney having an outer section with discharge openings at the bottom through which liquid of condensation or other liquid entering the chimney from the top will be discharged outside of the chimney without danger of dripping or discharging within the building to which the chimney is applied.

Other objects of the invention will appear in this specification and will be apparent from the accompanying drawing in which

Fig. 1 is a side elevation with parts shown in the section of a slope type of chimney in accordance with this invention; and

Fig. 2 is a sectional view of a ridge type of chimney to which the invention is applied.

In the ordinary type of smoke-stack or chimney, the flue is uniform in size or continuous from the inside to the upper or outer discharge end. For many installations and uses, this is quite detrimental, particularly where the flue gases contain much moisture which condenses in the upper or outer portion of the chimney and may therefore flow downwardly or return on the inside of the chimney and even discharge on the inside of the building. If the top of the chimney is open, rain may enter and wash down the inside of the chimney causing an undesirable flow or dripping of material therefrom.

The present invention overcomes these objections by providing an upper or outer chimney or exhaust section which is slightly larger in size than the lower chimney or flue section to which it is connected, leaving a space at the bottom of the larger section which provides a discharge opening or openings all around the bottom through which the water of condensation or other liquid which flows down the inside wall, may pass freely without entering the lower chimney section.

Referring now more particularly to the drawing, a roof casting or plate 4 is applied to a suitable opening in a flat or sloped roof 5, having a flange 6 which fits the roof opening and a projecting edge flange 7 which overlies the opening, forming its own flashing, making a weather-tight connection with the roof. Extending upwardly and outwardly opposite the flange 6, is an open sleeve or shell 8, preferably wider at one side than the other so that it is applied more easily to a sloping roof.

In opposite sides of the sleeve 8, are rounded recesses or grooves 9, adapted to receive corresponding projections 10, extending inwardly from the opposite sides of a cover member 11 adapted to be adjusted to a level position, and having a depending skirt 12 which overlaps the upwardly projecting edge of sleeve 8, forming a weather-proof connection.

At one side of the cover member is a fastening means for holding it in any adjusted level position, said means preferably comprising a bolt 13 attached or pivoted at its lower end to the roof-plate as by means of a boss or projection 14, and the upper threaded extremity extending through an opening 15 in the rim of the cover member with fastening nuts 16 adjustable on the threaded portion at either side of the rim to hold the cover member in any adjusted position.

Extending through the top of the cover member and preferably formed integral therewith is a flue section 17, having an upper flange 18 extending above the top of the cover member 11 and having a lower sleeve portion 19 to which other pipe sections or flues are connected inside the building to which the structure is applied.

Extending at spaced distances around the base of the flange 18 on top of the cover member are projections 20, forming a seat for the lower end of an outer flue or chimney section 21. This chimney section is slightly larger in diameter than the flange 18 so that when centered therewith, it provides an opening all around the flange and it is held in spaced position by bolts 24 inserted through the lower edge of the chimney section 21 and the upper edge of the flange 18. Thus a substantially continuous relief and discharge opening is provided all around the bottom of the chimney section 21 outside of the flange and beneath the outer chimney section between the spaced supports 20.

At the top of the outer chimney section, a weathervane 22 may be mounted upon a central bearing pin 23, which is turned by the wind, or a stationary projecting canopy top may be applied.

In either case, some water may enter the top of the chimney and tend to flow down the inner sides thereof, and either this or any liquid which condenses on the inner wall of the outer chimney section due to gases or discharge through the chimney itself as they flow downward on the inside wall thereof, will not continue through to the interior of the building through the lower flue section 17, but will be discharged at the bottom of the outer flue section between the projections 20, and on top of the cover member. In this way, they will be prevented from returning through the chimney or flue, they will not drip or discharge on the inside of the building, and will be discharged at the top of the cover member which may be easily cleaned if the seepage causes an objectionable accumulation of dirt therefrom.

A similar construction is provided for a ridge opening 25 in a roof-plate 26 having an upwardly projecting flange 27 at each side with a central projection 28 for seating a bearing member 29 at opposite sides of a cover-plate 30. This cover-plate has a skirt 31 which may be uniform on both sides of its center mounting, and preferably two adjusting bolts 13 are provided for holding the cover member in place. The outer chimney member and its connection with the inner flue member 17 are the same as that shown in Fig. 1, providing a liquid discharging space and weep-slots at the bottom of the outer chimney section.

For roofs of different pitch, different roof-plates 26 may be required, but the same cover-plate may be used, and in the slope type of chimney, a single roof-plate and cover as shown, have sufficient adjustment for most roof slopes.

I claim:

1. In a chimney of the class described, a roof-plate, a cover member pivoting thereto, means for adjusting the cover member to horizontal position depending upon the slope of the roof, the cover member having a flue section extending through it and above the upper side thereof, an outer chimney flue of larger diameter than the flue section, projections extending outwardly from the upper surface of the cover member adjacent the flue projection thereof forming a seat for the lower end of the chimney section and weep-slots at the lower end of the outer chimney flue between the projections, and attaching means for connecting the lower end of the chimney section to the upper end of the section, leaving a free space entirely surrounding the flue section and connecting with the said slots.

2. In a chimney of the class described, a roof-plate having an upwardly extending sleeve, a cover member having a depending skirt to cover the sleeve, and opposite pivotal mountings, means to adjust the member on the mountings to horizontal position, a flue extending through the top of the cover member with a flange projecting above it, an outer chimney section of larger size than the flue section to fit freely over the flange thereof, projections at the top surface of the cover member for supporting the lower end of the chimney section above the surface of the cover member leaving weep-spaces between the projections, and fastening means for connecting the lower end of the chimney section to the projecting flange at the top of the cover member, and for holding them to provide a space entirely around the flange communicating with the drip openings at the bottom, and means for excluding moisture at the top of the chimney.

3. In a chimney of the class described, a roof supported member having a cover plate with a lower flue section extending through and above it, projections on the top surface of the plate at intervals around and close to the flue projection, and an outer flue section of larger size than the lower flue with its lower end supported on the plate projections to leave weep-spaces between them and also extending over the upper end of the lower flue leaving a free space between the flue sections communicating with the weep-spaces between the plate projections.

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