No. 774,258. PATENTED NOV. 8, 1904.

G. W. LEWIS.

CHIMNEY BASE PROTECTOR.

APPLICATION FILED DEC. 1, 1903.

NO MODEL.

Fig. 1.

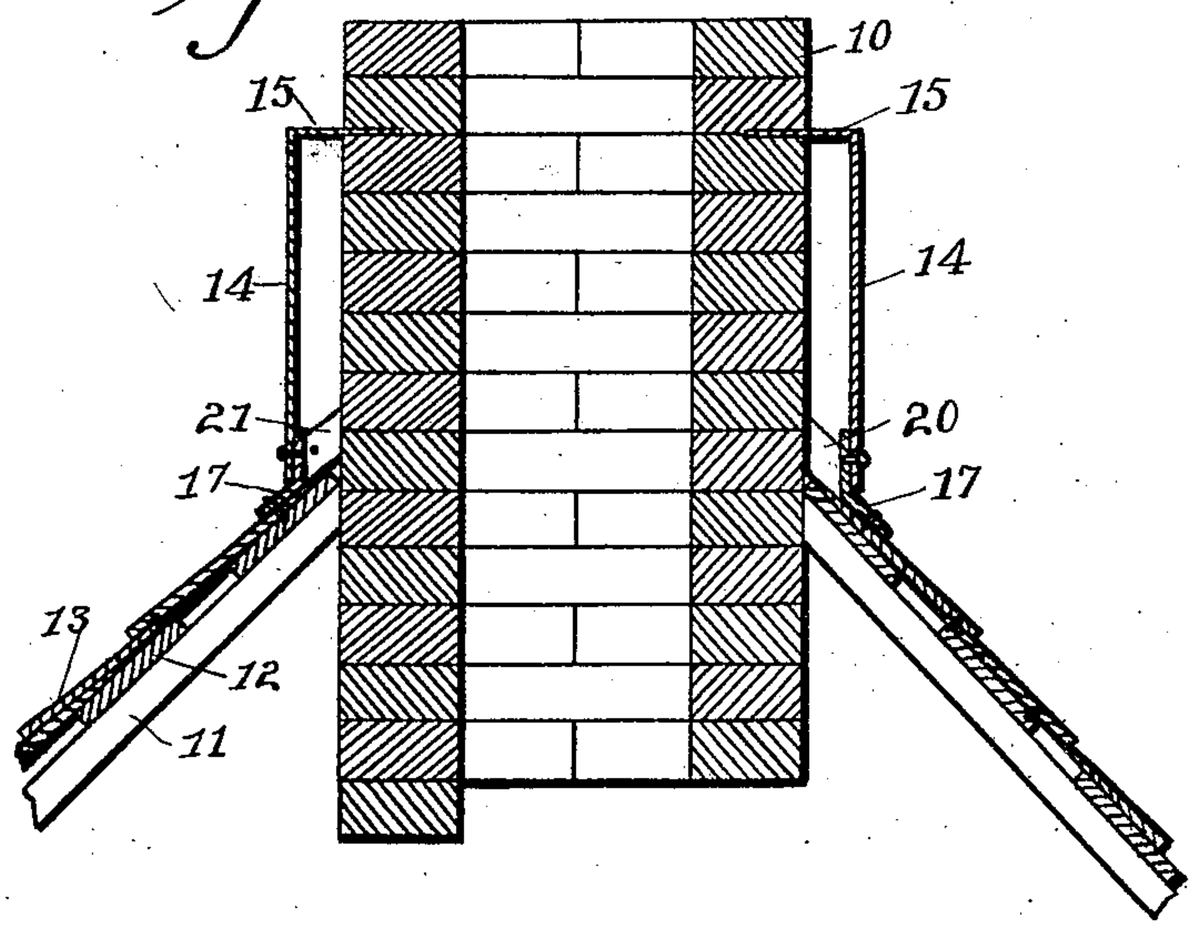


Fig. 3.

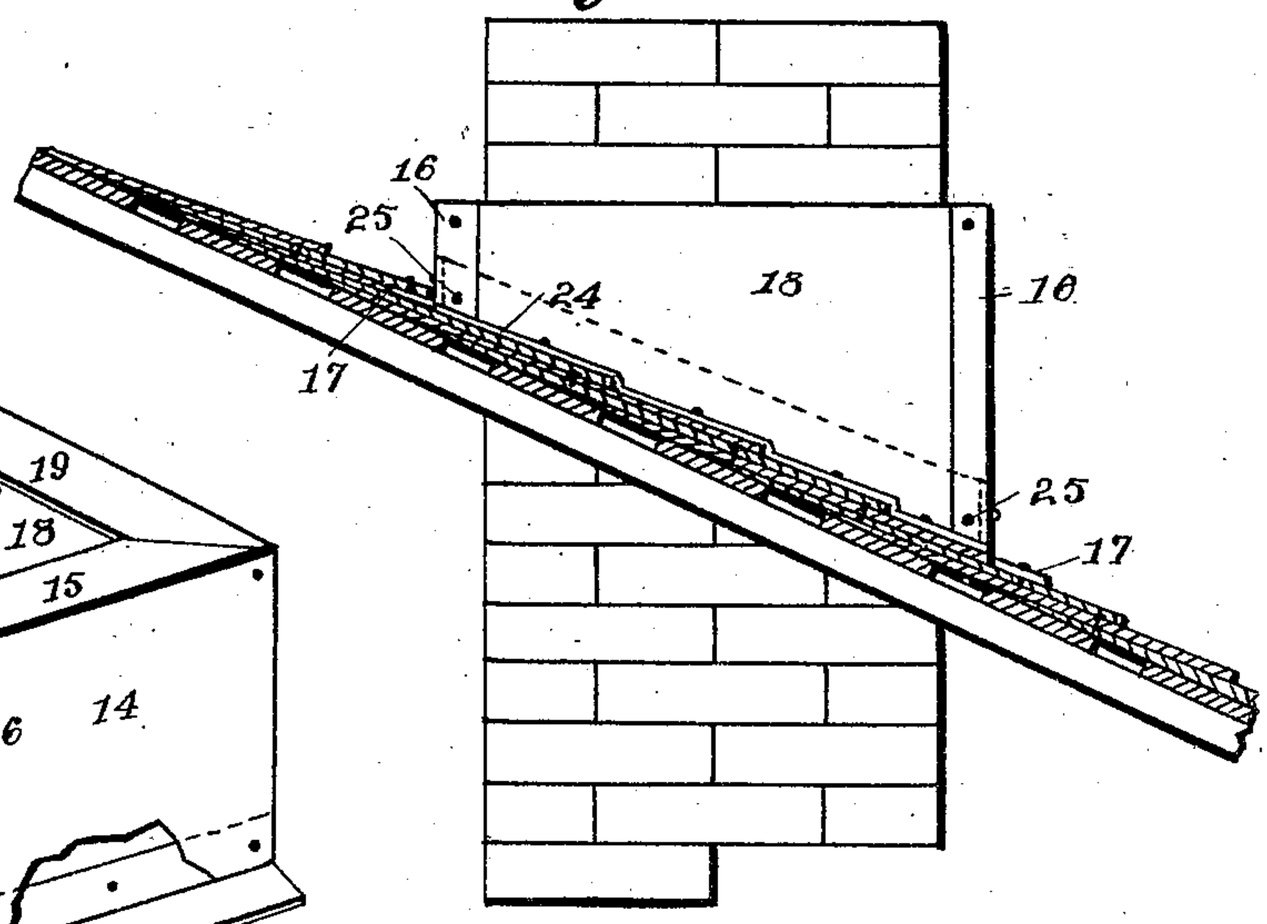
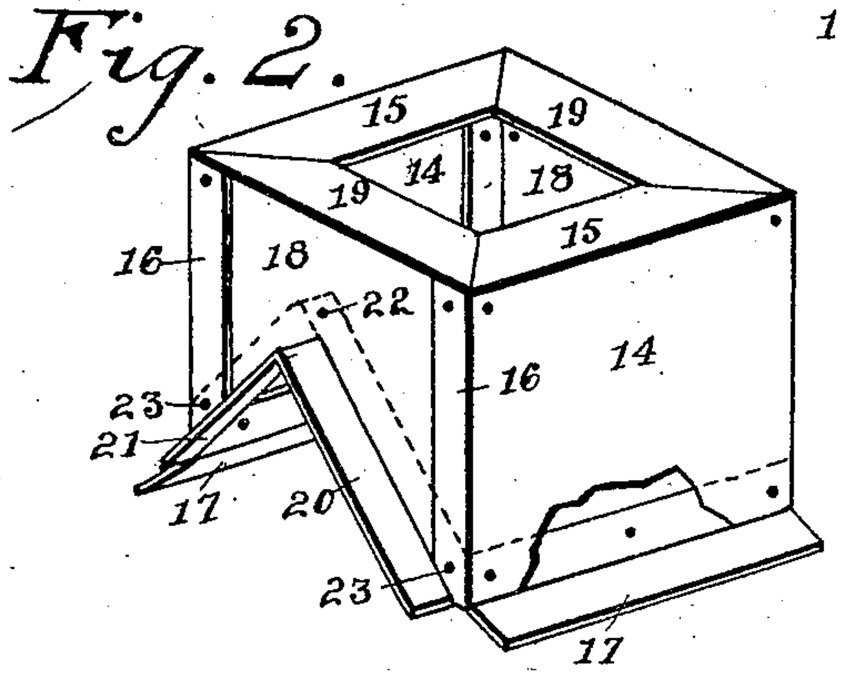


Fig. 2.



Witnesses.
L. H. Orwig.
C. G. Teague.

Inventor. George W. Lewis
by Orwig Lane Attys

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No. 774,258. Patented November 8, 1904.

UNITED STATES PATENT OFFICE.

GEORGE W. LEWIS, OF CARLISLE, IOWA.

CHIMNEY-BASE PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 774,258, dated November 8, 1904.

Application filed December 1, 1903. Serial No. 183,415. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LEWIS, a citizen of the United States, residing at Carlisle, in the county of Warren and State of Iowa, have invented certain new and useful Improvements in Chimney-Base Protectors, of which the following is a specification.

The objects of my invention are to provide a chimney-base protector of simple, durable, and inexpensive construction designed to protect that portion of the chimney which projects through a roof. At the point where a chimney composed of brick and mortar passes through a roof it has been found that rain rebounding from the roof will strike upon the layer of mortar nearest the roof and in time wear away the mortar, thus leaving an opening from the interior of the chimney to the wooden roof, and fires frequently occur on this account. Furthermore, it is desirable to prevent water from passing down along the bricks of the chimney through the roof where the action of the water tends to decay that portion of the roof, which touches the chimney; and my object is to provide a protector which will prevent the action of water wearing away the mortar and will also prevent water from passing along the surface of the bricks coming in contact with the wood of the roof surrounding the chimney.

A further object is to provide a protector of this class that may be readily and quickly adapted for use in connection with roofs of different angles.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical central sectional view of a portion of a brick chimney passing through a roof with my protector applied thereto as in practical use. Fig. 2 shows a perspective view of the protector, and Fig. 3 shows a vertical sectional view of a roof and illustrating a modified form of protector applied to a chimney.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the brick chimney. The numeral 11 indicates the rafters upon which the strips 12 are fixed, and shingles 13 are secured to the said strips in the ordinary way. The preferred form of my protector is designed for use in connection with chimneys passing through the apex of a roof the sides of which are arranged at angles of about forty-five degrees. The protector proper comprises two sheet-metal sides 14 with their upper edges inclined inwardly at 15 and their end edges inclined inwardly at 16. Fixed to the bottom of each side piece 14 is a metal strip 17, a portion of which is riveted to the inside of the strip 14 and the lower end of which projects downwardly and outwardly at the same angle as the roof to which it is to be attached. The end pieces of the protector are also made of sheet metal and are indicated by the reference-numeral 18. Their upper ends 19 are inclined inwardly, and their lower edges are shaped to fit the apex of the roof for which they are designed. The edges of the ends 18 are riveted to the parts 16, and thus form a substantially squared body portion. For each end piece 18 I have provided two strips 20 and 21, L-shaped in cross-section, one part of each strip standing against the inner face of the part 18 and the other part of each strip projecting out under the part 18. These strips are pivotally connected with the part 18 by means of a rivet 22, and the lower end strips are firmly connected with the part 18 by means of the rivets 23. In this connection it is to be remembered that the angle of roofs varies considerably, and my object in providing two strips 20 and 21 and pivotally connecting the strips together and with the end 18 is this: Assuming that the shape of the roof to be fitted is such that the strips 20 and 21 will form a less angle than the ones shown in the accompanying drawings, then the rivets 23 are placed in position after the protector has been set on the roof and the strips 20 and 21 have been placed close to the shingles on the sides of the roof. In this way the strips 20 and 21 will accurately fit against the shingles, although the lower edges of the ends 18 will not touch the tops of the horizontal parts of the strips 20. Assuming, how-

ever, that the roof to be fitted is of a less incline than the ones shown in the accompanying drawings, then the operator cuts away the lower edges of the ends 18 and fits the strips 20 and 21 to the roof and afterward inserts the rivets 23. Obviously this change may be readily and easily accomplished by the workmen who are erecting the chimney.

In use the chimney is built up through the roof to a point where it projects slightly above the roof. Then the protector is fitted to the roof in the manner before described, and the strips 17, 20, and 21 are then secured on top of the shingles surrounding the chimney. Then the top pieces 15 and 19 are inserted between layers of brick of the chimney, as shown in Fig. 1, and the next layer of brick is placed on top of the parts 15 and 19, thus firmly embedding the said parts 15 and 19 in the chimney and forming a water-tight joint at this part. The sides and ends of the protector stand at some distance from the bricks of the chimney, and the tops 15 and 19 form a watershed which will direct the water away from the chimney and will prevent water from passing down along the sides of the chimney and thus coming in contact with the wooden portions of the roof surrounding the chimney. It is of course essential that some means be provided for directing the water away from the base of the chimney, and the tops 15 and 19 of my improved protector are designed for this purpose. It is possible, of course, that the action of water rebounding from the tops 15 and 19 may wear away the mortar at this point; but even if an opening were made in the chimney at this point fire or excessive heat passing through the chimney would not ignite the wooden parts of the roof, and hence would not be so dangerous as openings in the chimney on a level with the roof.

In the modified form shown in Fig. 3 I have illustrated a protector especially designed for use in connection with inclined roofs where the chimney does not pass through the apex of the roof. In this form of the device the parts are the same as in my preferred form, except that the ends 18 are simply cut at the angle of the roof on a straight line, and in place of the strips 20 and 21 I provide a single strip 24, L-shaped in cross-section, which is connected at its ends with the edges 16 by means of the rivets 25, and in this form of my invention the upper one of the strips 17 pass under the shingles instead of on top of them. The lower strip 17, however, is arranged in the same way as in my preferred form.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved chimney-base protector, comprising independent sheet-metal sides and ends each having its upper edge projecting inwardly and its sides riveted to the adjacent parts, sheet-metal strips approximately L-shaped in cross-section secured to the lower edges of the end pieces and projecting outwardly and a single rivet connecting one end of each strip to the adjacent end piece and sheet-metal strips approximately L-shaped in cross-section for the sides, for the purposes stated.

2. An improved chimney-base protector, comprising sheet-metal sides having inwardly-extended upper edges and inwardly-extended side edges, sheet-metal end pieces secured to the side edges of the side pieces, said end pieces having inwardly-extended upper edges and having their lower ends shaped to fit a roof-apex, two L-shaped strips pivotally connected with each other and to the central portion of each end piece.

3. An improved chimney-base protector, comprising sheet-metal sides having inwardly-extended upper edges and inwardly-extended side edges, sheet-metal end pieces secured to the side edges of the side pieces, said end pieces having inwardly-extended upper edges and having their lower ends shaped to fit a roof-apex, two L-shaped strips pivotally connected with each other and to the central portion of each end piece, and rivets securing the lower ends of said L-shaped strips to the end pieces, and strips secured to the inner surfaces of the side pieces near their lower edges, and extending downwardly and outwardly therefrom, substantially as and for the purposes stated.

GEORGE W. LEWIS.

Witnesses:
JAS. O. UTTERSON,
H. LEWIS.