

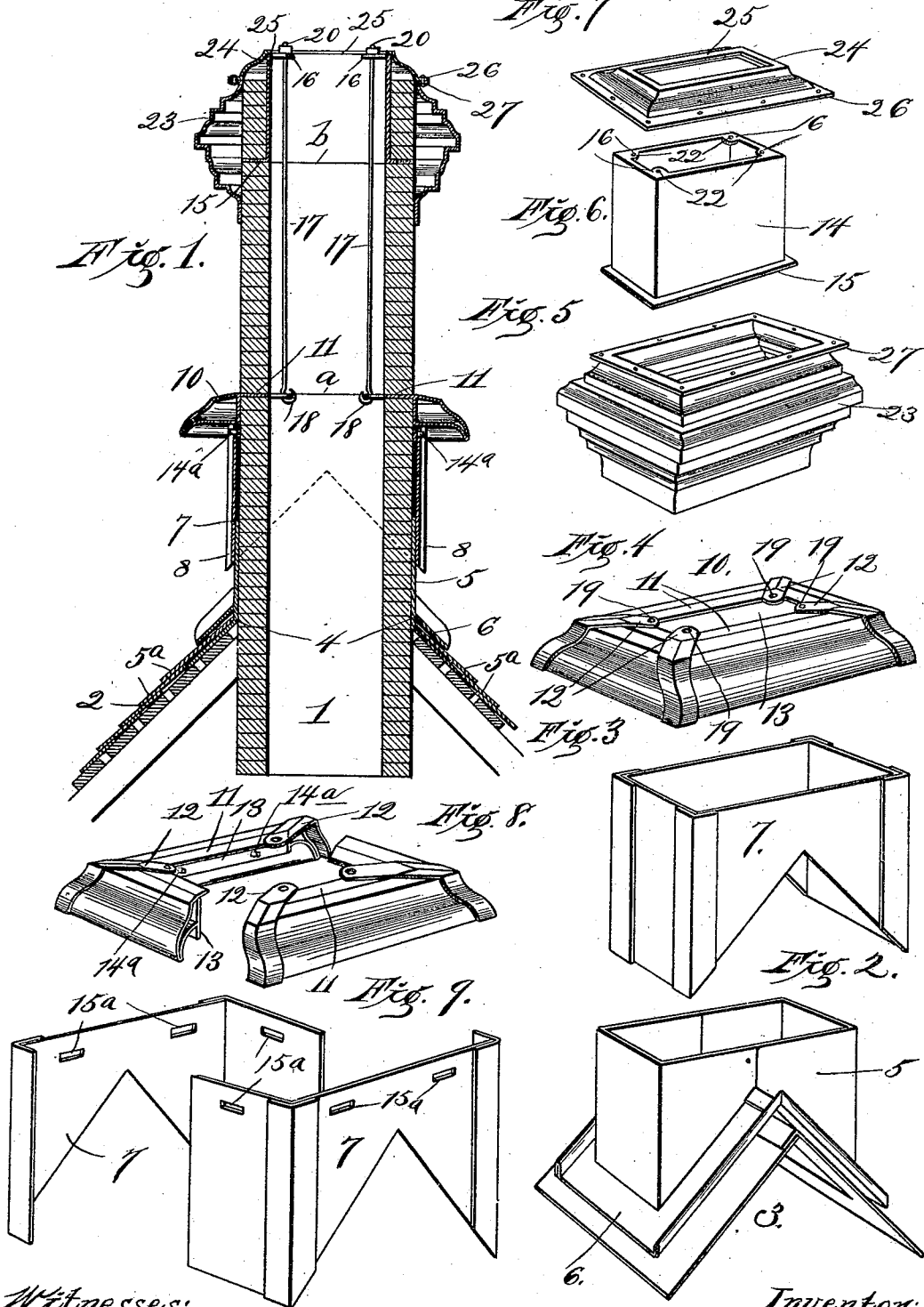
(No Model.)

A. C. MILLER.

FIRE AND WATER PROOF CHIMNEY ATTACHMENT.

No. 515,153.

Patented Feb. 20, 1894.



Witnesses:
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UNITED STATES PATENT OFFICE.

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FIRE AND WATER PROOF CHIMNEY ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 515,153, dated February 20, 1894.

Application filed March 16, 1893. Serial No. 466,276. (No model.)

To all whom it may concern:

Be it known that I, ALVIN C. MILLER, of Iola, Allen county, Kansas, have invented certain new and useful Improvements in Fire and Water Proof Chimney Attachments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in fire and waterproof chimney attachments, and the object of my invention is to provide attachments for the chimney and roof, which will allow of the independent shrinkage of the house or of the chimney without injury to either; also to provide attachments which are simple, strong, durable and inexpensive of construction, and which may be easily and readily applied to the chimney.

To the above purposes, my invention consists in certain peculiar and novel features of construction and arrangement as will be hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, is a vertical transverse section of a house roof and chimney constructed in accordance with my invention, and with my attachments applied thereto. Fig. 2, is a perspective view of an attachment adapted to loosely surround or inclose the chimney and rest upon the roof. Fig. 3, is a similar view of a sleeve section adapted to inclose the chimney and the upper or sleeve portion of the attachment resting upon the roof. Fig. 4, is a perspective view of a water-deflector hood, also adapted to surround the chimney and supported at the upper end of the sleeve section. Figs. 5, 6 and 7, are perspective views of the protective attachments applied to the upper portion of the chimney. Fig. 8, is a perspective view of a water deflector hood as formed in two sections for application to a completed chimney. Fig. 9, is a perspective view of the sleeve section adapted to be carried by said cap, and also formed in two sections for application to a completed chimney.

With chimneys of the ordinary construction, where the roofing (of frame houses) is

built closely and snugly against the lower side of the water cap, formed by a projecting layer of brick, there is always danger of fire or leakage, due to the settling of the chimney or the shrinkage of the house. The shrinkage of the house leaves a space between the under side of the water cap and the upper surface of the roof, where the water may leak through. The settling of the chimney causes the water cap of brick to weigh upon the roof, thus causing in time a crack or crevice through the chimney at that point, through which the fire from the flue may pass and set fire to the roof. My invention is designed to obviate these dangers by securing attachments to the chimney and roof, which will allow of the settling of the chimney or the shrinkage of the building, independently of each other, and at the same time prevent any water entering between the chimney and the roof. These attachments may be applied to a completed chimney, but it is preferred to apply the attachments to chimneys in course of construction.

Referring to the drawings, where similar letters and numerals designate similar parts, 1 designates a chimney formed in accordance with my invention, and 2 designates the gable roof of a house through which the chimney projects. This chimney is first built a suitable distance above the roof, to the height *a*. An inverted V-shaped attachment 3 preferably of metal, is formed with an opening 4 in its center, slightly larger and corresponding in form to the exterior shape, in cross section of the chimney. A sleeve extension 5 is formed to marginally surround the opening 4 at its lower end, and projects a suitable distance above the apex of the inverted V-shaped attachment, the upper margin of the sleeve extension being preferably formed in a horizontal plane. This attachment 3 is now slipped over the chimney until the inverted V-shaped portion rests upon the boarding of the house, as shown in Fig. 1, and below the shingles 5^a. To prevent water entering between the sleeve extension and the shingles, I provide a water-cap or table 6, which is secured to or formed with the attachment 3. This water-cap or table is also of inverted V-shape, parallel

preferably with the inverted V-shaped body-portion of the attachment, and rests upon the adjacent shingles of the roof as shown.

It is to be understood, that I do not confine myself to the use of the attachment having a water-cap 6; the inverted V-shaped base portion of the attachment 3 forming a perfect water cap when placed upon the shingles instead of beneath them. The sleeve section 7 is of shape in cross section to correspond and fit around the chimney, and is formed with the opposite pair of inverted V-shaped notches or recesses 8, to correspond preferably to the shape of the water-cap plate 6. This sleeve section 7 is of diameter sufficient to inclose the sleeve extension of the attachment 3, and is slipped over the end of the chimney until it rests upon the water cap 6. An annular hood 10 is marginally of rectangular form to correspond to the shape of the chimney, and is formed with a horizontal and inwardly extending flange 11 which rests upon the brick-work of the chimney, and is also formed with the reinforce strips 12 projecting horizontally into the passage of the chimney, preferably at the corners. The hood is also provided with a depending sleeve portion 13 inclosing the chimney and extending to within a suitable distance of the upper end of the sleeve extension 5. The sleeve section 7 is then elevated and the upper margin thereof is soldered or otherwise suitably secured to the depending sleeve portion 13 of the deflector hood; thus leaving a space between the lower end of the sleeve section and the upper surface of the water-cap. It is to be understood that the sleeve section 7 and the hood deflector 10 may be formed integral if desired. After the construction described is completed, the chimney is built up to the height of the line *b*, Fig. 1.

The rectangular tubular supporting bracket 14 is of internal diameter to correspond with the passage of the chimney and is provided with a horizontal flange 15 extending outwardly from and surrounding its lower margin. The horizontal flange is placed upon the chimney at the line *b*, so that the flange shall surround the passage of said chimney. Projecting inwardly from the corners of the upper end of the tubular supporting bracket are the ears or lugs 16 which are disposed vertically over the reinforce strips of the deflector hood. The brick-work to form the remainder of the chimney is now built upon the flange 15 to within a suitable distance of the upper end of the tubular supporting bracket 14. To additionally strengthen the upper portion of the chimney, tie-rods 17 have hooks 18 at their lower ends which are adapted to engage the openings 19 in the inner ends of the reinforce strips of the deflector hood. The upper screw threaded ends 20 of these rods 17 are passed through openings or apertures 22 formed through the ears or lugs 16 of the deflector-hood, and a retaining nut engages the projecting end of each

tie-rod, and bears upon the ears or lugs 16. An ornamental protector hood 23 of corresponding shape is slipped upon the end of the chimney, and a cap 24 of corresponding form is provided with a flange 25 resting upon the upper margin of the tubular bracket, and also provided at its lower end with an outwardly extending flange 26, to the under side of which is bolted the horizontal flange 27 at the upper end of the hood 23.

It will thus be seen that I have provided attachments for the upper end of the chimney which will protect it from the weather at that point, which in time would wear away the mortar and endanger the upper end of the chimney, and which also presents a very ornamental appearance. In Figs. 2, 8 and 9, the attachments are shown as formed in two sections, so that these attachments may be applied to completed chimneys. To accomplish this, the mortar at the line *a* is filed from between the bricks and the horizontal flange 11 of one section of the hood is introduced in its place. The mortar is then removed from the opposite side, and the flange 11 of the other section of the deflector hood is fitted therein; thus forming practically a single hood. The depending flanges 13 forming the sleeve portion of the deflector hood is in this instance provided with outstanding pins 14^a, shown most clearly in Fig. 1. The inverted V-shaped attachment 3 is also formed in two sections which are placed upon opposite sides of the chimney and rest upon the roof as described. The sleeve section 7 is also formed in two sections which are fitted around the chimney, and are each provided with openings 15^a, which are engaged over the pins 14^a of the hood. The top or upper end of the chimney is removed, and then rebuilt with the tubular supporting bracket, the ornamental protective hood and the cap for the top of the chimney, and the tie-rods secured in place as described.

From this description, taken in connection with the accompanying drawings, it will be seen, that should the house settle or shrink the sleeve extension surrounding the chimney and fitting beneath the sleeve section moves downward with it, without withdrawing entirely from the sleeve section, and should the house remain stationary, and the chimney settle, the sleeve section simply slides or telescopes farther upon the sleeve extension 5 of the roof attachment 3. Thus it will be seen that a telescopic connection is formed between the roof attachment 3 and the sleeve section 6, which effectually prevents the entrance of water through the roof at that point, and also by leaving the roof and chimney entirely independent of each other obviates all danger of fire due to a cracked or broken chimney. This construction will also allow the chimney or house to be raised or lowered a short distance if necessary.

It is to be understood that I do not confine

myself to the precise form of the attachment section resting upon the roof, as said section is designed to be made to conform to the shape of the roof.

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

1. A chimney attachment, comprising a hood having a flange 11 secured in the brick-
10 work of the chimney, a depending annular flange snugly inclosing the chimney to prevent any lateral displacement or movement, and a sleeve extension 7 depending from the outer margin of the annular flange 13 so as
15 to leave a space between the outer side of the sleeve extension 7, in combination with a section inclosing the chimney and resting upon the roof, and having an upwardly projecting sleeve fitting closely around the chimney
20 and occupying and adapted to operate in the space between the chimney and the extension 7, substantially as set forth.

2. In a chimney attachment, a hood surrounding the chimney, having a flange secured in the brick-work, and having strips
25 projecting into the chimney passage, in combination with a tubular bracket secured in the upper portion of the chimney, having inwardly projecting ears, and the rods connecting the ears of said tubular bracket and the strips of the hood, substantially as set forth.
30

3. In a chimney attachment, the combination with a tubular bracket internally corre-

sponding in size and shape to and having an annular and outwardly projecting flange 15
35 built in the upper portion of a chimney so as to lie between and separate the adjacent layers of the material of which the chimney is composed, of an annular cap resting upon the upper end of the tubular bracket, and in-
40 closing the upper end of the chimney, and an annular hood, carried by said cap and depending for a suitable distance downward to inclose or protect the upper portion of the chimney to a point below the line of separa-
45 tion occupied by the flange of the tubular bracket, substantially as set forth.

4. In a chimney attachment, the combination with a hood having a horizontal flange
50 11 built into the chimney, and a vertically depending flange 13 fitting snugly against the outer side of the chimney, and pins projecting from said depending flange, of a section surrounding the chimney and resting upon
55 the roof, and having a sleeve extension snugly surrounding the chimney, and a sleeve inclosing the said sleeve extension and having openings engaging the pins of the flange 13, substantially as set forth.

In testimony whereof I affix my signature in
60 the presence of two witnesses.

ALVIN C. MILLER.

Witnesses:

MAUD FITZPATRICK,
M. P. SMITH.