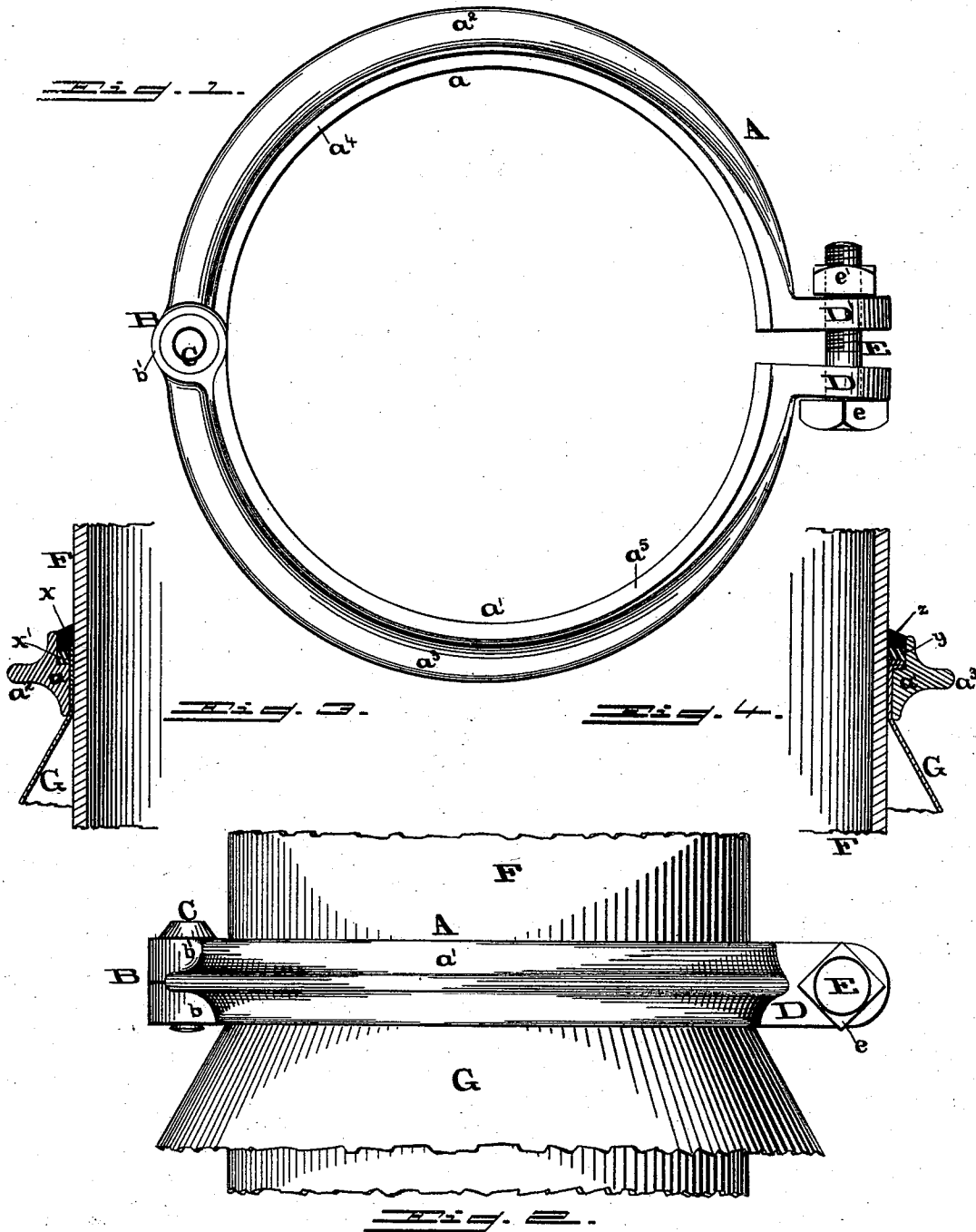


(No Model.)

W. H. BERGER & E. NEWMAN.
ROOF COLLAR CLAMP FOR VENT PIPES.

No. 507,777.

Patented Oct. 31, 1893.



WITNESSES

W. T. Benson

R. Dale Sparkman

INVENTORS

William H. Berger,

Eugene Newman,

By Howard Powell, Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. BERGER, OF WYNCOTE, PENNSYLVANIA, AND EUGENE NEWMAN,
OF BRIDGEPORT, CONNECTICUT, ASSIGNORS TO SAID BERGER.

ROOF-COLLAR CLAMP FOR VENT-PIPES.

SPECIFICATION forming part of Letters Patent No. 507,777, dated October 31, 1893.

Application filed February 8, 1893. Serial No. 461,482. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. BERGER, residing at Wyncote, county of Montgomery, State of Pennsylvania, and EUGENE NEWMAN, residing at Bridgeport, in the county of Fairfield and State of Connecticut, citizens of the United States, have invented certain new and useful Improvements in Roof-Collar Clamps for Vent-Pipes, of which the following is a specification.

Our invention has relation to vent and other pipes and has for its object the provision of novel, simple and efficient means whereby an air and water-tight joint, between such pipes and the roof through which they extend for purposes of ventilation, &c., may be secured, preventing the access of water and air to the inside of the walls of the building, or elsewhere therein, through the pipe-opening and the deleterious consequences thereof. Heretofore, this end has been sought after, generally, through the provision of a conical collar, of tin or other suitable metal, having an annular flange adapted to extend beneath the slates or shingles composing the roof-covering and, at its upper and smaller end brought into as close relation as possible with the vent or other pipe. Now, owing to the fact that such pipes are usually of rough, cast-iron, or other black pipe, it is impossible to solder the collar thereto, without specially preparing the same therefor, which is difficult and expensive. Therefore, it has been the custom to unite said collar and pipe, at their points of contact, and the joint closed through the use of putty, which latter expedient has proven defective and objectionable, in that the settling of the roof, which inevitably occurs, causes the already hardened putty to crack and drop off, said collar being unprovided with means for retaining the putty, or the breaking of the joint between the collar and pipe, rendering the roof as leaky, at this point, as before.

Our invention contemplates the obviation of these difficulties and consists of an adjustable clamp provided with a locking device, adapted to encircle the roof-collar, just below or adjacent to its upper edge and the junction thereof with the vent or other pipe, and cause the same to tightly hug the latter

so as to preclude the passage of water or air between said collar and pipe, such clamp having in its upper inner edge an internal annular recess for reception, when the thickness of the metal permits, of the free upper edge of the roof-collar, which is bent or pressed thereinto, and the calking material with which such recess is filled thereafter, the latter affording an additional safeguard against leakage. Such recess, also, where the metal of which the collar is composed is too heavy or stiff to allow of its upper edge being pressed or bent over, forming, in conjunction with the pipe which it encircles, an annular gutter or groove around such pipe, for the reception of solder or other suitable material, thus producing a perfectly air and water-tight joint, in a quick and inexpensive manner, which is unaffected by the settling of the roof or other outside influence.

Our invention still further consists in the details of construction and the combinations of parts as hereinafter fully described and claimed and as shown in the accompanying drawings, wherein—

Figure 1 is a plan view of our improved clamp detached. Fig. 2 is a side elevation of such clamp in operation, the pipe and roof-collar being partly broken away. Fig. 3 is a vertical section of a part of each, the clamp, collar and pipe, showing a solder-joint, and Fig. 4 is a similar view showing the edge of the collar pressed into the groove and calked in such position.

In said drawings, A represents the improved clamp, composed of the semi-circular sections $a a'$, each provided at their meeting ends with flat bosses $b b'$, forming the leaves or members of the hinge-joint B, said bosses having registering vertical openings therein for the passage of the bolt C, the latter forming the pintle of the hinge. The opposite adjacent ends of said clamp-sections have each a lateral, vertically disposed, projection or draw-lug D D', the same having therein transverse openings, not shown, for reception of the horizontal draw and lock-bolt E, the head e of the same abutting against the outer side of the lug D and the nut e' against the outside of lug D'. As will be observed, each of the sections $a a'$ is strengthened by a section $a^2 a^3$

of the peripheral flange of the clamp, said flange tapering from about the middle of the sections to the ends at which are located the draw-lugs, while the annular internal recess in the upper inner side of the clamp A, shown in the drawings, is formed by a lateral offset a^4 a^5 in each said section, said offsets being circularly continuous of each other; said recess, when the clamp is in the position shown in Figs. 2, 3 and 4 of the drawings, forming, in conjunction with the pipe F which it encircles, an annular gutter or groove around the latter.

G represents the conical roof-collar, the upper portion only of which being shown, the same being composed, as usual, of two vertical sections secured together and having their lower edges provided with the usual flanges for extending under the slates, tiles, shingles, &c. The part of said collar adjacent to its upper edge, when subjected to the pressure of the clamp A, through the screwing inwardly of the nut e' and the draft of the lugs D D' into closer relation, as shown in Figs. 2, 3, and 4, is caused to tightly hug the pipe F; whereupon, where said collar is of metal too stiff to bend easily, when the clamp is set a little above the upper edge of the collar, as shown in Fig. 3, the gutter formed around said pipe by the clamp has, first, the usual rope-like calking material pressed therinto, the same being represented by the dotted lines x' , and the remaining space in such gutter is filled with solder, x , or other suitable material, rendering the joint between the collar and pipe absolutely tight; while, as shown in Fig. 4, when the collar is thin enough to permit of the portion thereof above the clamp being pressed or bent into the gutter or recess, in which event said clamp is set below the upper edge of said collar, the space above the same is filled with any suitable calking material, y , and solder z or other suitable material for the attainment of the desired tight joint, such recess effectually preventing the accidental displacement of such material under all circumstances.

If for any purpose it be found necessary to remove or change the position of the clamp, the same is facilitated by simply releasing the pressure of the nut e' , or removing it entirely from the bolt, the openings in the draw-lugs being somewhat larger than the latter and permitting of a slight lateral movement thereof, said clamp when removed affording free access to the calking material and permitting of its removal.

Obviously the shape of the annular recess hereinbefore described need not, necessarily, be exactly the same, in cross-section, as shown in the drawings, nor is our invention confined thereto.

What we claim as our invention is as follows:

1. The combination of a roof-collar, a vent or other pipe encircled thereby, a clamp

adapted to maintain such collar in close contact with said pipe and having an internal annular recess, surrounding the latter, for reception of a suitable calking, substantially as and for the purpose specified.

2. The combination of a roof-collar, a vent or other pipe encircled thereby, a clamp adapted to draw and maintain such collar in close contact with said pipe and having an internal annular recess, surrounding the latter, for reception of a suitable calking, substantially as and for the purpose specified.

3. The combination of a roof-collar, a vent or other pipe encircled thereby, an adjustable clamp adapted to maintain such collar in close contact with said pipe and having an internal annular recess, surrounding the latter, for reception of a suitable calking substantially as and for the purpose specified.

4. The combination of a roof-collar, a vent or other pipe encircled thereby, a hinged clamp adapted to draw and maintain such collar in close contact with said pipe and having an internal annular recess, surrounding the latter, for reception of a suitable calking, substantially as and for the purpose specified.

5. The combination of a roof-collar, a vent or other pipe encircled thereby, a hinged clamp provided with draw-lugs, a draw-bolt in and operating upon said lugs, and an internal annular recess, in said clamp and surrounding said pipe, for reception of a suitable calking, substantially as and for the purpose specified.

6. The combination of a roof-collar, a vent or other pipe encircled thereby, a hinged clamp provided with draw-lugs, a draw-bolt in and operating upon said lugs, and an internal annular recess, in said clamp and surrounding said pipe, for reception of the overturned edge of said collar and a suitable calking, substantially as and for the purpose specified.

7. The combination of a roof-collar, a vent or other pipe encircled thereby, a hinged clamp provided with a peripheral flange and having draw-lugs, a draw-bolt in and operating upon said lugs, and an internal annular recess, in said clamp and surrounding said pipe, for reception of the overturned edge of said collar and a suitable calking, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand this 28th day of January, 1893.

WILLIAM H. BERGER.

Witnesses:

WM. H. POWELL,

R. DALE SPARHAWK.

In testimony whereof I have hereunto set my hand this 30th day of January, 1893.

EUGENE NEWMAN.

Witnesses:

STEPHEN OSBORNE,

ANDREW W. STEIGER.