No. 730,089. PATENTED JUNE 2, 1903.

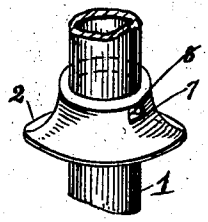
J. BROPSON.

ROOF JOINT FOR VENT PIPES.

APPLICATION FILED OCT. 20, 1902.

NO MODEL.

Fig. 3.



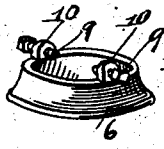


Fig. 4.

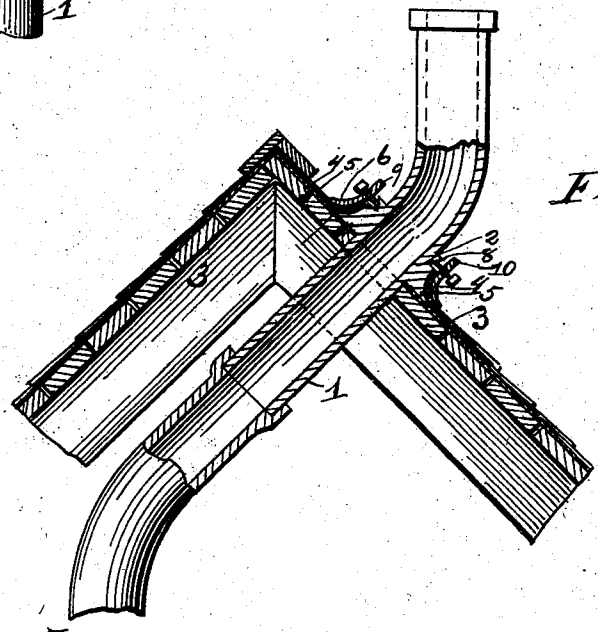
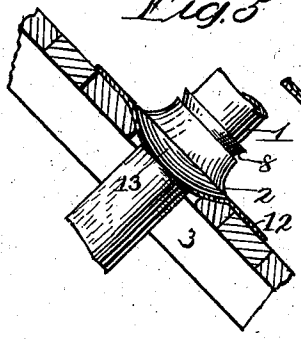


Fig. 1.

Fig. 5.



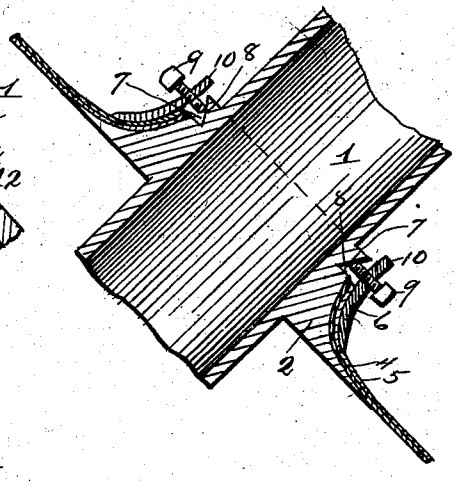


Fig. 2.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 730,089. Patented June 2, 1903.

UNITED STATES PATENT OFFICE.

JAMES BROPSON, OF CLEVELAND, OHIO.

ROOF-JOINT FOR VENT-PIPES.

SPECIFICATION forming part of Letters Patent No. 730,089, dated June 2, 1903.

Application filed October 20, 1902. Serial No. 127,949. (No model.)

To all whom it may concern:

Be it known that I, JAMES BROPSON, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Roof-Joints for Vent-Pipes, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in roof-joints for vent-pipes leading from closets or soil-pipes; and the objects of the invention are to provide a simple and efficient joint which can be tightened easily if it should by means of any accident become loosened and which would not require calking or heated or wiped joints.

My invention consists in the flanged pipe designed to rest directly upon the roof, with the clamping-ring by means of which the sheet-lead packing is secured thereto and with the details of construction and combination and arrangement of parts, as hereinafter described, shown in the accompanying drawings, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional view of a roof and ridge, showing the position of the vent-pipe and its joint connection with the roof. Fig. 2 is a longitudinal section of vent-pipe, showing the roof connections enlarged from Fig. 1. Fig. 3 is a detail view of a portion of the vent-pipe and the conical ring integral therewith. Fig. 4 is a similar view of the exterior clamping-ring. Fig. 5 is a sectional view of roof, showing socket-joint connection for the vent-pipe.

In the views, 1 is the vent-pipe; 2, a conical flange integral thereon, which fits closely upon the roof 3 and conforms to the angle of the roof. Over this flange is placed a sheet of rubber 4 and a sheet of lead 5, which rise about the flange and fit it closely. To thoroughly compress the packing-sheets about the flange and prevent leakage, an exterior ring 6, spreading conically at the bottom, encircles the flange and packing where it rises upon the flange and is adjustably secured in the following manner: 7 represents recesses in the upper edge of the integral flange, which are provided with inwardly and downwardly slanting inner faces 8. Set-screws 9 pass through lugs 10 on the outer ring and are inserted in the recesses 7 when the ring has been placed over the flange and packing-sheets. It will readily be seen that as the set-screws bear upon the inclined surfaces 8 they will force the ring down upon the packing-sheets and flange, or the ring can be driven down by the hammer and secured afterward by the set-screws, so that if it becomes slightly loose it can be immediately tightened without any waste of time or the application of molten lead or a calking-tool. This is a decided advantage, since in calking joints which contain sheet-lead there is great danger of breaking or tearing the lead. This joint, however, being formed entirely by compression, there is no danger of breaking any part of the packing.

It is understood that the vent-pipe can be made straight and the flange at right angles therewith, or the flange may be made at any angle desired to conform to the angle of the roof.

In Fig. 5 is clearly shown a socket-joint for the roof connection of the vent-pipe, by means of which it can readily be adapted to any angle of the roof. Here 12 is a metal plate, which is dished to receive a curved projection 13 on the under surface of the flange 2. An opening in this plate and the opening in the roof are shown large enough to afford some play to the pipe, so that the angle can be varied at pleasure, thus forming the joint with greater ease than if the engaging surfaces are flat. The outer sleeve 6 and the rubber and the lead coatings are then attached in the manner heretofore described.

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

1. A roof-joint for a vent-pipe, comprising in combination with the roof, and pipe passing therethrough, a conical flange integral with the pipe, conforming with the angle of the roof, packing-sheets encircling said flange, upon the conical surface thereof, a ring encircling said flange and conical portion of the packing-sheets, and means for securing and forcing down the ring upon said sheets, substantially as described.

2. In a roof-joint for a vent-pipe, the com-

bination with the pipe and a conical flange integral therewith, of a packing-sheet upon said flange, a ring encircling said flange and packing-sheet, and means for securing the ring to the flange and for compressing the ring upon the packing-sheet consisting of recesses in the flange provided with inwardly and downwardly inclined inner faces, and set-screws in the ring adapted to engage the said inclined faces, substantially as described.

3. In a roof-joint for a vent-pipe the combination with the roof provided with an opening, and the pipe provided with a flange having a curved projection thereunder, of a dished plate in which the curved surface of the flange rests, arranged between the flange and roof and provided with a central opening, substantially as described.

4. In combination with a roof a dished plate thereon, a pipe passing through said roof and plate, a flange on said pipe provided with a curved bottom adapted to rest in said dished plate, a packing-sheet about said flange and means for securely clamping said packing-sheet about said flange, substantially as described.

In testimony whereof I hereby set my hand this 22d day of September, 1902.

JAMES BROPSON.

Witnesses:

WM. M. MONROE,

C. H. OLDS.