

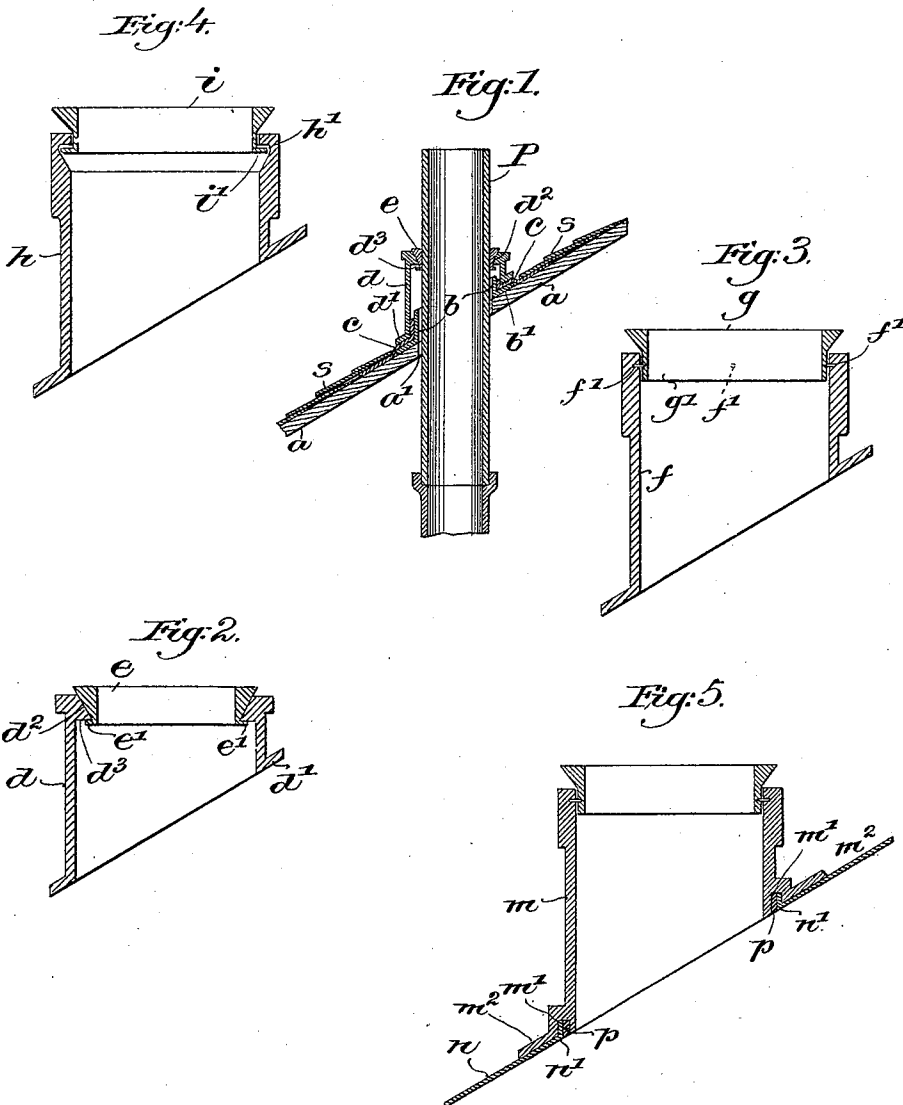
(No Model.)

M. F. MORAN.

EXTERNAL METALLIC JOINT FOR ESCAPE PIPES.

No. 538,429.

Patented Apr. 30, 1895.



Witnesses.

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UNITED STATES PATENT OFFICE,

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EXTERNAL METALLIC JOINT FOR ESCAPE-PIPES.

SPECIFICATION forming part of Letters Patent No. 538,429, dated April 30, 1895.

Application filed January 14, 1895. Serial No. 534,777. (No model.)

To all whom it may concern:

Be it known that I, MYLES F. MORAN, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in External Metallic Joints for Escape-Pipes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of an external joint for escape pipes, whereby a tight metallic joint may be made above the roof of the building without the use of molten metal.

15 In making so called "poured" joints oakum or other similar material is inserted and wedged into the space between the pipe and a surrounding metallic hub, and molten lead is then poured upon the supporting material
20 and allowed to cool, after which it is usually hammered. This method is dangerous for the workman, as care has to be exercised in handling the molten metal, and in wet or slippery weather the danger is greatly increased because the proper attention cannot be paid to the movements of the workman, and serious falls frequently occur. I have obviated this by surrounding the escape pipe above the roof with a rigid metallic sleeve, and driving
30 into the annular space between them a wedge-like lead packing ring at the upper end of the sleeve, the ring preferably being temporarily attached to the sleeve for convenience in transportation. When hammered into place
35 the ring makes a water or moisture tight joint above the roof.

Figure 1 in vertical section represents one form of external joint for escape-pipes embodying my invention, the parts being shown
40 in position on a roof. Fig. 2 is a similar view of the joint-supporting sleeve with the packing-ring temporarily attached thereto. Fig. 3 is a modified form, in section, of the sleeve and packing. Fig. 4 is yet another modification to be described, and Fig. 5 represents in
45 section the sleeve with another form of joint at its base.

The upper end of the escape pipe P is extended through a hole *a'* in the roof *a*, Fig. 1, and a laterally flanged and preferably rigid
50 base *b*, beveled to correspond with the slant

of the roof, rests thereupon and surrounds the pipe. The flange *b'* of the base may be of sufficient width to extend under the shingles or slates *s*, or preferably a sheet of malleable
55 metal *c*, such as lead or copper, is beaten up around the base and over its flange *b'*, and the shingles are overlapped on this metallic sheet.

A joint supporting sleeve *d*, Figs. 1 and 2
60 preferably flanged at its lower end, as at *d'*, is mounted on the base, surrounding it and the pipe P, the upper end of the sleeve being beveled at its inner end, as at *d²*, and forming a projecting lip or shoulder *d³*. A ring *e*
65 of lead, substantially wedge-shaped in cross-section, normally rests on the beveled edge *d²* of the sleeve, and is bent over at *e'* under the shoulder *d³*, to form a temporary attachment between the ring and sleeve, for convenience
70 in transportation, the sleeve and attached ring being slipped over the pipe P until the lower beveled end of the sleeve rests on the base flange *b'*, or upon the interposed malleable
75 sheet *c*. The workman then hammers the lead ring down tightly into the annular space between the pipe and the upper end of the sleeve *a*, forming thereby a water tight joint above the roof, and preventing moisture from
80 entering between the pipe and sleeve, the wedge-like form of the packing ring *e* assisting in guiding it into place.

In the modification shown in Fig. 3 the sleeve *f* has sharp upper corners, and in casting it is provided with a plurality of preferably pointed projections *f'*, onto which is
85 pressed the depending flange *g'* of the wedge-like packing ring *g*. When the latter is hammered into place the projections *f'* are usually broken off in the operation, they having no
90 function other than to form a means for temporarily holding the ring in place on the sleeve during transportation.

In the modification shown in Fig. 4 the sleeve *h* is interiorly grooved at *h'*, and the
95 depending portion *i'* of the packing ring *i* is bent up to enter it.

Whatever the form of the upper end of the sleeve, or the means for attaching the packing ring temporarily thereto, the sleeve forms
100 a rigid outer wall for the joint when hammered into place. No oakum or similar pack-

ing material is required, and the use of molten metal in making the joint is absolutely dispensed with.

By temporarily attaching the joint making ring to the sleeve the two parts are always ready for use, saving time and labor to the workman.

It will be obvious that when the joint is completed the temporary connection between the sleeve and ring has no further function.

The hub like portion of the base *b* inserted within the lower end of the sleeve, with the overlapping of the shingles or roof slates *s*, insures the tightness of the joint around the pipe hole *a* in the roof.

In Fig. 5 the base of the sleeve *m*, which in other respects is like the sleeve *f*, is annularly recessed or grooved at its lower end at *m'*, to receive therein the upturned lip or edge *n'* of a sheet *n* of preferably malleable metal, such as lead, the shingles overlapping the sheet and the lateral flange *m*² of the sleeve, which in this instance forms the base. A packing *p*, which may be either a ribbon of lead beaten into the recess *m'* between its inner wall and the lip *n'*, or a poured joint, made before the sleeve is placed in position upon the roof, keeps the junction of the roof and the sleeve moisture-tight, and obviates the use of a separate base, such as *b*, shown in Fig. 1, and in some instances is preferable thereto.

When the sheet *n* is made of lead, the packing *p* forms a most perfect joint between its upturned lip *n'* and the iron sleeve.

I claim—

1. In an external joint for escape pipes, a rigid metallic sleeve to surround the pipe above the roof, a wedge-like lead packing-ring adapted to be driven into the annular space between the pipe and the upper end of the sleeve, to form a joint above the roof, and means to temporarily connect said ring and

sleeve comprising a projecting portion on one to engage a part of the other, substantially as described.

2. An external joint for escape pipes, consisting of a rigid metallic sleeve to surround the pipe and flanged at its lower end, a laterally flanged base to rest upon the roof, and enter the lower end of the sleeve, a lead packing-ring adapted to be driven between the pipe and the upper end of the sleeve, to form a joint above the roof, and means to temporarily connect said ring and sleeve comprising a projecting portion on one to engage a part of the other, substantially as described.

3. In an external joint for escape pipes, a flanged base to rest on the roof around the pipe, a joint supporting sleeve mounted thereon and outwardly flanged at its lower end, pointed projections on the inner surface of the sleeve near its upper end, and a wedge-like lead ring attached to the upper end of the sleeve, by said projections and adapted to be driven into the annular space between it and the pipe, and thereby form a joint above the roof, substantially as described.

4. In an external joint for escape pipes, a rigid metallic sleeve to surround the pipe above the roof and having an annular recess in its lower end, a metallic packing-ring adapted to be driven into the annular space between the pipe and the upper end of the sleeve, to form a joint above the roof, a sheet of metal having an upturned lip to enter the recess in the sleeve, and a packing interposed between said lip and one wall of the recess, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MYLES F. MORAN.

Witnesses:

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EMMA J. BENNETT.