

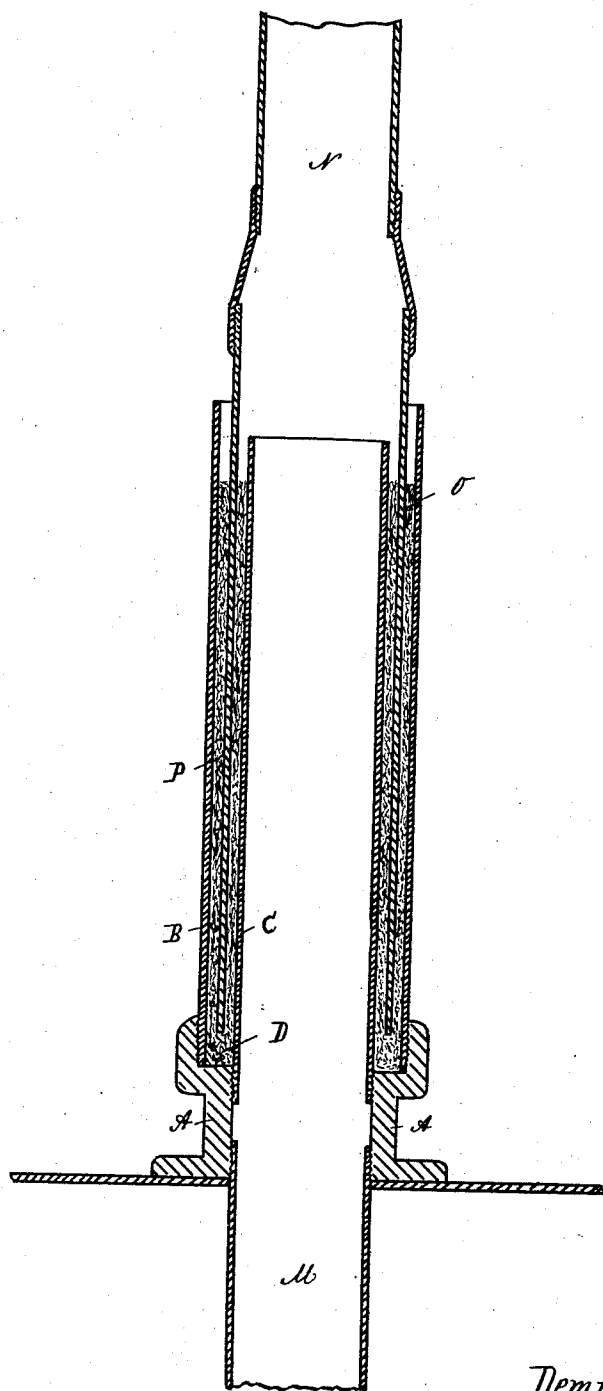
(No Model.)

D. JARVES.

GAS TIGHT EXPANSION JOINT.

No. 320,661.

Patented June 23, 1885.



Attest:
John Schuman.
[Signature]

Inventor:
Deming Jarves
by his Atty
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UNITED STATES PATENT OFFICE.

DEMING JARVES, OF DETROIT, MICHIGAN.

GAS-TIGHT EXPANSION-JOINT.

SPECIFICATION forming part of Letters Patent No. 320,661, dated June 23, 1885.

Application filed March 18, 1885. (No model.)

To all whom it may concern:

Be it known that I, DEMING JARVES, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Gas-Tight Expansion-Joints; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to new and useful improvements in gas-tight expansion-joints; and the improvement is more particularly designed for use in connection with the vertical discharge-pipes which carry off into the air the offensive emanations resulting from the calcination of bones or from destructive distillation in general. It often becomes necessary to use expansion-joints in these discharge pipes or flues, and as these emanations are hot, very penetrating, and offensive to the smell, and of a peculiarly destructive nature, great difficulty has been experienced heretofore to construct a suitable gas-tight expansion-joint for the purpose.

It is the object of my improvement to furnish such a joint, which, by practical experience, has been found to answer the purpose exceedingly well; and my invention consists in the peculiar construction of a seal-joint in which a material of a viscid and permanent nature is used to form the seal, all as hereinafter described.

In the drawing which accompanies this specification I show a vertical central section through my improved gas-tight expansion-joint.

In the drawing, M and N are the two sections of the discharge-pipe, which are connected by my improved expansion-joint. A is a collar or coupling secured to the upper end of the pipe M, and B C are two pipe-joints secured by screw or other joints to the top of the coupling A, so as to form an annular chamber or cup, D, between them. The annular chamber D is closed at the bottom and open at the top. The inner pipe-joint, C, is of the same diameter with the pipes M N, and its top is preferably a little lower than the top of the pipe B.

The pipe N has secured to its lower end, or formed thereon, a pipe-section, O, which pro-

jects into the chamber D, and reaches near the bottom thereof, dividing the annular chamber thereby into an inner and outer section.

P is a packing or seal filled into the inner and outer section of the annular chamber D. It consists of tar—preferably bone-tar—boiled down to a sirupy consistence before being used. This substance may be introduced into the chamber D before the pipe-section O is inserted.

In practice I have found that this joint gives the discharge-pipe the necessary freedom to expand and contract readily, and the indestructible nature and permanency of the tar will keep the joint gas-proof for a long period.

I have found that bone-tar is especially suitable, as it maintains its viscid nature under the influence of the heat, to which it is liable to be subjected in the discharge-pipes to a remarkable degree. All tars deficient in this quality are unsuitable for the purpose.

It is obvious that the expansion-joint as herein constructed is only applicable to vertical pipes. By keeping the tops of the pipe-joint C below the top of the pipe-joint B the expansion-joint will always keep clean on the outside.

I am aware of the English Patents Nos. 8,376 of 1840 and 2,340 of 1878, and make no claim to the constructions shown therein as forming part of my invention. I deem it important that the top of the pipe C be kept lower than the top of the outer pipe, B, for by this construction the expansion-joint will not only always keep clean on the outside, but the packing, if it overflows, will pass down in the inside, and any fumes arising therefrom in burning will pass away through the pipe.

What I claim as my invention is—

1. In a gas-proof expansion-joint for the purposes described, the combination of the collar A and the pipe-joints B C, secured thereto and forming an annular cup, with the top of the inner rim lower than that of the outer one, the pipe-joint O, forming a dividing-diaphragm in the upper portion of said cup, and the packing P, substantially as described.

2. In a gas-proof expansion-joint, the com-

ination, with the collar A, having annular
internal shoulder, as shown, and threaded
above and below said shoulder, the pipe B, se-
cured to said collar above its shoulder, the
5 pipe C, secured to the collar below said shoul-
der, with its top below the top of the pipe B,
and forming an annular chamber, D, between
said pipes, and the pipe O, projecting into

said chamber and dividing it into an inner
and outer section, and the packing P in said ro
chamber, substantially as described.

DEMING JARVES.

Witnesses:

HENRY B. LOTHROP,
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