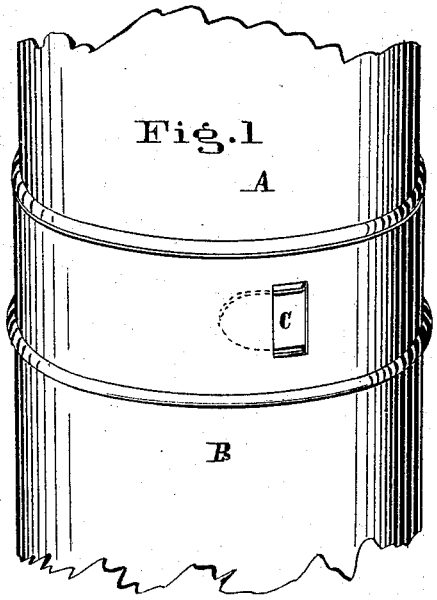
H. KLEIN.

Sheet-Metal Pipe-Joint.

No. 211,164. Patented Jan. 7, 1879.

Fig. 1



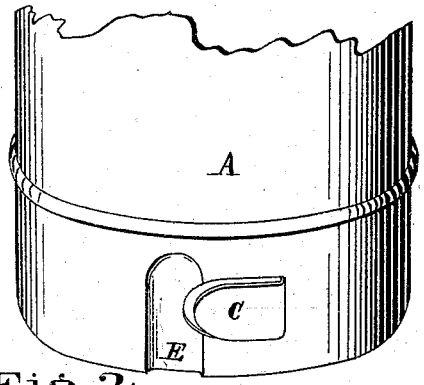
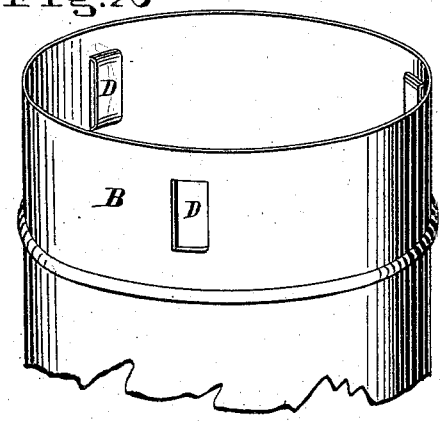


Fig. 2



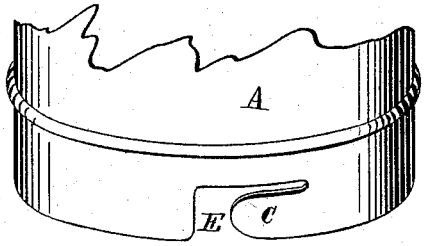
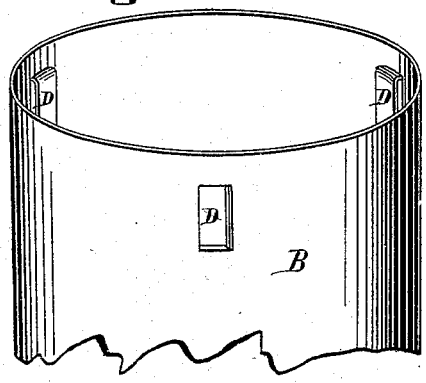


Fig. 4



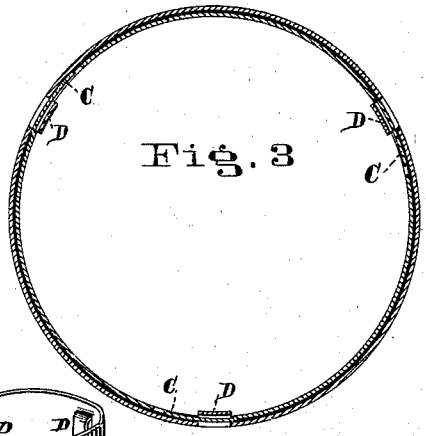
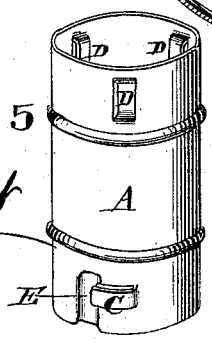


Fig. 3

Fig. 5



Attest

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UNITED STATES PATENT OFFICE.

HENRY KLEIN, OF CINCINNATI, OHIO.

IMPROVEMENT IN SHEET-METAL-PIPE JOINTS.

Specification forming part of Letters Patent No. **211,164**, dated January 7, 1879; application led September 17, 1878.

To all whom it may concern:

Be it known that I, HENRY KLEIN, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Sheet-Metal-Pipe Joints, of which the following is a specification:

This invention relates to sheet-metal pipes. Its object is to provide the several joints with means of securely locking any number of them together, the male and female locking parts being formed in the material of the joints.

The invention consists in providing one end of the joint with a loop, and the opposite end with a strap, both loop and strap being formed in the material of the joint, and adapted to firmly lock two or more joints together.

My improved pipe-joint, its mode of construction and operation, will be fully understood from the following description of the accompanying drawings, in which—

Figure 1 is a perspective view of two joints of pipe locked together. Fig. 2 is a similar view of the same parts detached. Fig. 3 is a transverse sectional plan taken through the center of the strap and loop, Fig. 1; and Fig. 4 is a perspective view of the opposite ends of my pipe-joint, showing a modification of the locking strap or tongue. Fig. 5 is a perspective view of a length of pipe, showing the tongues and loops on the respective ends thereof.

Referring to the lettered parts, A represents the male, and B the female, part of the joint. C is a strap or tongue, of which there may be any desired number, stamped out from the metal of the male end of the joint. They are of a size to enter the loop D, similarly stamped from the metal of the female part B.

E is a depression stamped into the male part A in front of the free end of strap C, as seen in Fig. 2, or an opening cut out in the end, as shown in the modification, Fig. 4. Its purpose is to allow the loop D to be pushed in front of the free end of the tongue, so that by turning the male within the female part the tongue C will pass through the loop D, and firmly lock the parts together.

The incisions which form the tongue and loop, as well as their form, may be made by male and female dies, either in the blank sheet of metal before the pipe-joint is formed, or afterward.

I have shown the male locking-strap C upon the male end of the pipe-joint, and the female receiving-loop D upon the female end, and this I believe to be the more desirable mode; but this order may be readily reversed, as when the blank sheets are stamped in the manner described it will depend upon which side of the metal is turned out whether the loop or strap is left upon the female end. A locking-joint may also be made by forming the male joints upon one piece of pipe, and female joints upon alternate pieces.

I do not claim connecting two lengths of pipe by a bayonet-joint.

I claim—

1. As a new article of manufacture, a joint of pipe having straps C at one end and loops D at the opposite end, for the purpose of locking several of said joints together to form a pipe of any desired length, substantially as described.

2. In combination, the parts A and B of a sheet-metal pipe, said part A having strap C and depression E, and part B having loop D, formed of the metal of the pipe, for the purpose of forming a lock-joint, substantially as described.

3. The combination of the straps C upon the male section of pipe, and loops D upon the female section, for the purpose of locking several joints together to form a stove-pipe, as described.

HENRY KLEIN.

Witnesses:
GEO. J. MURRAY,
DAVID BARD.