

H. B. MORRISON.

Stovepipe Joint.

No. 99,459.

Patented Feb. 1, 1870.

Fig. 1.

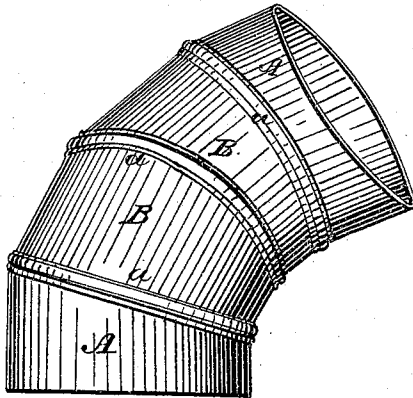


Fig. 2.

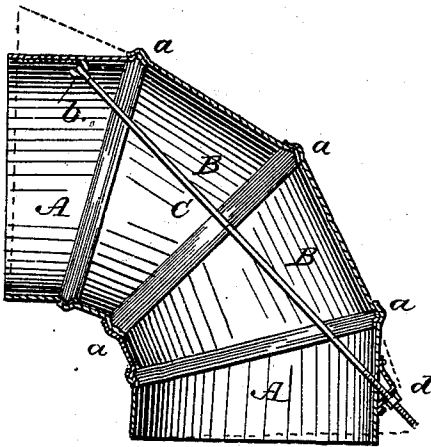


Fig. 3.



Witness

R. F. Oyon

Geo. H. Math

Inventor

H. B. Morrison
By J. Fraser & Co.
Atty

UNITED STATES PATENT OFFICE.

H. B. MORRISON, OF LE ROY, NEW YORK.

IMPROVEMENT IN STOVE-PIPE JOINTS.

Specification forming part of Letters Patent No. **99,459**, dated February 1, 1870.

To all whom it may concern:

Be it known that I, H. B. MORRISON, of Le Roy, in the county of Genesee and State of New York, have invented a certain new and useful Improvement in Elbow-Joints for Hot-Air and other Pipes; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved elbow adjusted with a double bend; Fig. 2, a section of the same in a right-angled position; Fig. 3, a section of the seam or joint enlarged.

This invention is an improvement upon that patented to me October 27, 1868; and consists, first, in the employment of loose rings, combined with the ends of the elbow, in such a manner as to adjust to different positions by a reverse movement; second, in an improved joint or seam for adjusting the parts; and, third, in the use of a rod for clamping the parts together.

In the drawings, A A represent the ends of the elbow, which connect with the mains of the pipe; and B B represent the rings, any desired number of which may be used. These rings are of wedging or angular form, and they are so connected with each other and with the ends of the elbow by the improved seam or joint, hereinafter described, as to be capable of turning in different directions by a reverse movement.

In Fig. 1 a double bend of the elbow is produced. In Fig. 2 a right-angled form is shown by black lines, and a different bend in dotted lines. In fact, almost any single or double angle or bend, from a right angle to a straight line, may be produced by the proper reversed turns of the rings, by which means the elbow may be adapted to any turn or twist of the main pipe at the moment of application, and without going to a shop to make a device for the special purpose. When fitted and adapted in such position it is fixed stationary by simply nipping up the seams by a proper instrument.

I am aware that hot-air pipes have been constructed in stationary sections that resemble in form the rings B, only that the narrow parts of the rings always come together, thus producing not a double bend, but simply a

difference in angle of a single bend, according as the width of the narrow parts was varied.

I do not claim simply making an elbow in sections to produce the proper bend; but the novelty in my case consists in the employment of wedging or angular rings, connected with each other and with the ends of the elbow in such a manner as to have a loose joint, so that a reverse movement of any two or more will produce a double bend, as in Fig. 1, or a change in the angle of the elbow, as in Fig. 2. This feature I believe to be new.

The seams or joints between the parts, to allow the free reverse adjustment of the same, are formed as follows: The oblique ends of the arms of the elbow, and also of the rings or sections, are run through a machine which produces a wide horizontal bead or corrugation, *a*, all around. The end of one ring is then slipped or sprung into the next, and so on, the bead of the one part striking and resting closely within that of the other part, as clearly shown in Fig. 3.

The advantage in this form of the joint is that a broad and wide bearing of the beads *a a* is produced, which gives strength to the connection of the rings, insures a free turning action, as the bracing and stiffened form of the beads prevents warping or bend, and at the same time forms a closer contact or bearing than usual, which is essential in hot-air and smoke pipes.

It will be noticed that the contact is over the whole swell of the bead. Furthermore, the bracing and stiffening form of the bead effectually prevents warping of the ends of the rings, which ordinarily occurs by the application of heat on sheet metal, and which, in the present instance, would destroy the circle of the joint, and therefore prevent the easy turning of the parts when it is desired to change the adjustment. This form of the seam or joint is far superior to that in which a single flange of one part rests in an overlapping sharp-edged bead of the other, in which case any warping of the seam or irregularity in the thin flange would interfere with the turning of the parts.

In one end or arm of the elbow is attached a hook or other device, *b*, with which connects a rod, *C*, which extends through the inside of the elbow and passes out through the side of

the other end of the elbow, where it has a nut, *d*, or other device for producing tension. By this means the elbow may be stiffened, if desired, without nipping up the seams, as before described. This is particularly applicable in water-pipes or for other uses where strong pipe is required.

I do not claim simply the interposition of angular sections in a pipe to produce a bend, as I am aware that the same have been before applied in a stationary manner; neither do I claim a seam or joint in which one part fits loosely in another to allow a turning motion; but

What I claim as my invention is—

1. The combination and arrangement, with the ends A A of the elbow, of interposed rings B B, of wedge form, which are connected with

each other and with the said ends of the elbow by a loose joint or seam in such a manner that a reverse turn may be given to the rings to change the angle or bend of the elbow, as herein described.

2. In combination with said parts, the seam or joint consisting of the broad beads *a a*, fitting one within the other, as described.

3. The combination of the tension-rod C with an elbow having a loose joint or joints, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

H. B. MORRISON.

Witnesses:

R. F. OSGOOD,
GEO. W. MIATT.