(No Model.)

A. T. MATTHEWS.

PIPE THIMBLE.

No. 533,072. Patented Jan. 29, 1895.

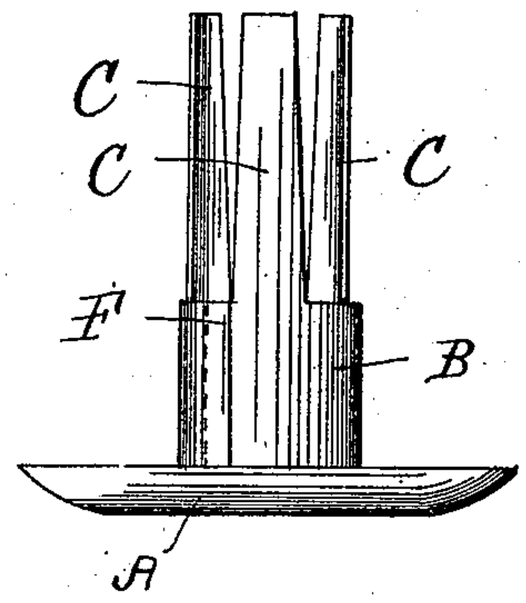

Fig. 1.

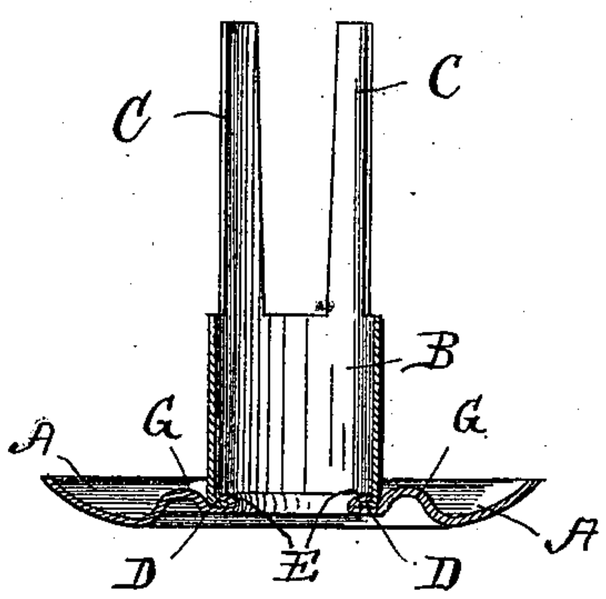

Fig. 2.

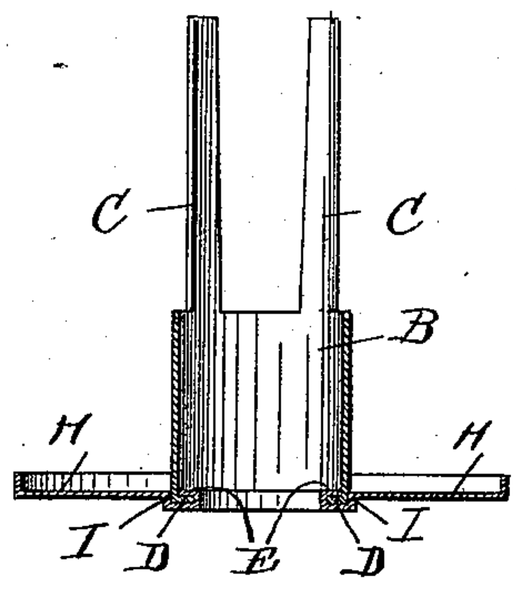

Fig. 3.

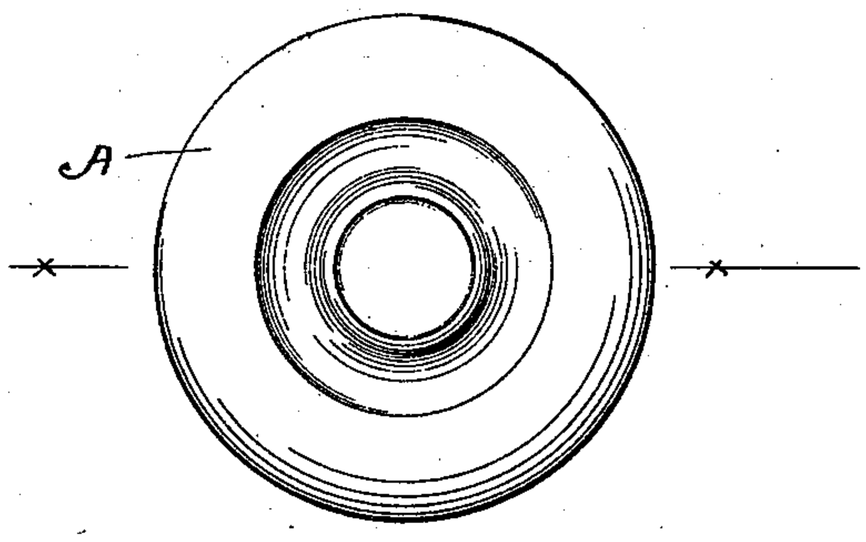

Fig. 4.

Witnesses
Walter S. Bowen
H. M. Fowler

Inventor
Ambrose T. Matthews
By his Attorney
Rufus B. Fowler

UNITED STATES PATENT OFFICE.

AMBROSE T. MATTHEWS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO FREDERICK E. REED AND JOHN REED, OF SAME PLACE.

PIPE-THIMBLE.

SPECIFICATION forming part of Letters Patent No. 533,072, dated January 29, 1895.

Application filed October 4, 1890. Serial No. 367,081. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE T. MATTHEWS, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Pipe-Thimbles, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, and in which—

Figure 1 represents a side elevation of a pipe thimble embodying my invention. Fig. 2 is a central sectional view on line X, X, Fig. 4. Fig. 3 is a central sectional view on the same plane as that shown in Fig. 3, but with a modified form of face plate, and Fig. 4 is a bottom view of the pipe thimble.

Similar letters refer to similar parts in the different figures.

My invention relates to certain improvements in the construction of those sheet metal pipe thimbles which are employed around steam, gas, water and other pipes, where they are carried through partitions and walls of buildings.

In Fig. 1 I have shown an elevation of a pipe thimble, used for such a purpose, in which A denotes the face plate or collar which surrounds the pipe and rests against the wall, and which is usually formed from an annular blank of sheet metal, stamped into any appropriate or desirable form, a common form being that represented in the drawings and shown in central sectional view in Fig. 2.

B denotes a sleeve or tube surrounding the pipe and provided with prongs C, C, and having at the opposite end a narrow flange D, turned inwardly, over and upon which the inner edge of the annular face plate is turned as at E, Figs. 2 and 3, thereby firmly attaching the sleeve and face plate together. The sleeve is formed of a strip of sheet metal rolled up in tubular form with overlapping edges as at F, although the edges can abut if desired, but when the sheet metal is of light weight, I prefer to overlap the edges as represented.

When the sheet metal face plate is stamped into its desired form I form a rib, or bead, G concentric with the inner edge of the face plate, and a sufficient distance therefrom, to receive the sleeve B, and allow the inner edge E of the face plate to be turned over the flange D of the sleeve B, and near enough to the edge E so the outer side of the sleeve will rest against the bead G, and thereby prevent the expansion of the sleeve B, causing the slipping, or opening of the overlapped edges at F.

When the sleeve and the face plate are to be united the tube forming the sleeve B is placed with its flange D resting upon the face plate with the outer end of the sleeve B in contact with the inner side of the rib, or bead, G. This brings the flange D of the sleeve B at once concentric with the inner edge of the face plate, and it also restrains the sleeve from outward expansion, which is liable to occur owing to the elasticity of the sheet metal of which the sleeve is made.

Were the rib, or bead, G omitted there would remain nothing to prevent the outward expansion of the sleeve, caused by the heat from an inclosed steam, or other pipe, except the friction of the inner edge E upon the surface of the narrow flange D, which would be insufficient to prevent the opening of the sleeve, and an increase of its diameter, eventually destroying the joint between the sleeve and face plate. To obviate this difficulty I form the concentric rib, or bead, G, which in the case of a sheet metal face plate is most conveniently done during the operation of stamping or pressing the blank into its desired shape, but in the case of a cast metal face plate the rib, or bead would, of course be formed in the casting.

By the use of the rib, as described, I avoid the necessity of uniting the overlapping edges F, of the sleeve, in order to prevent the expansion of the sleeve.

The particular form into which the sheet metal blank is stamped is wholly immaterial, for the purposes of my present invention, and in Fig. 3 of the drawings I have represented a modified form of the face plate, embodying, however the annular rib, or bead, shown in the form of a shoulder I, I, concentric with the inner edge of the face plate, and with a diameter equal to the outer diameter of the sleeve B. This method of attaching the sleeve to the face plate without uniting the overlapping edges F permits the free expansion

and contraction of the body of the sleeve B due to the heat from the inclosed pipe, by allowing the overlapping edges of the sleeve to slip, without destroying the joint between the sleeve and the face plate.

I am aware that pipe thimbles have been known having a split sleeve, or a sleeve open on its side; also that it is not new to form a concentric bead, or rib, upon the face-plate, and I do not herein claim the same broadly, but

What I claim as my invention, and desire to secure by Letters Patent, is—

In a pipe thimble the combination with a sleeve B open at its side throughout its length and provided at one end with an inwardly turned flange D and an annular face plate A provided with a concentric rib, or bead, G near its inner edge and having its inner edge E turned over and inclosing the inwardly turned flange D of said sleeve and with the outside of said sleeve bearing against said bead G, whereby the free expansion of the body of said sleeve is allowed, while the flanged end is held from expansion with its flange D, held within the turned over edge E of said face plate by means of said bead G, substantially as described.

Dated at Worcester, in the county of Worcester and State of Massachusetts, this 19th day of September, 1890.

AMBROSE T. MATTHEWS.

Witnesses:
RUFUS B. FOWLER,
H. M. FOWLER.