(No Model.)

S. E. THOMAS.

PIPE CONNECTION.

No. 390,821. Patented Oct. 9, 1888.

Fig. 2.

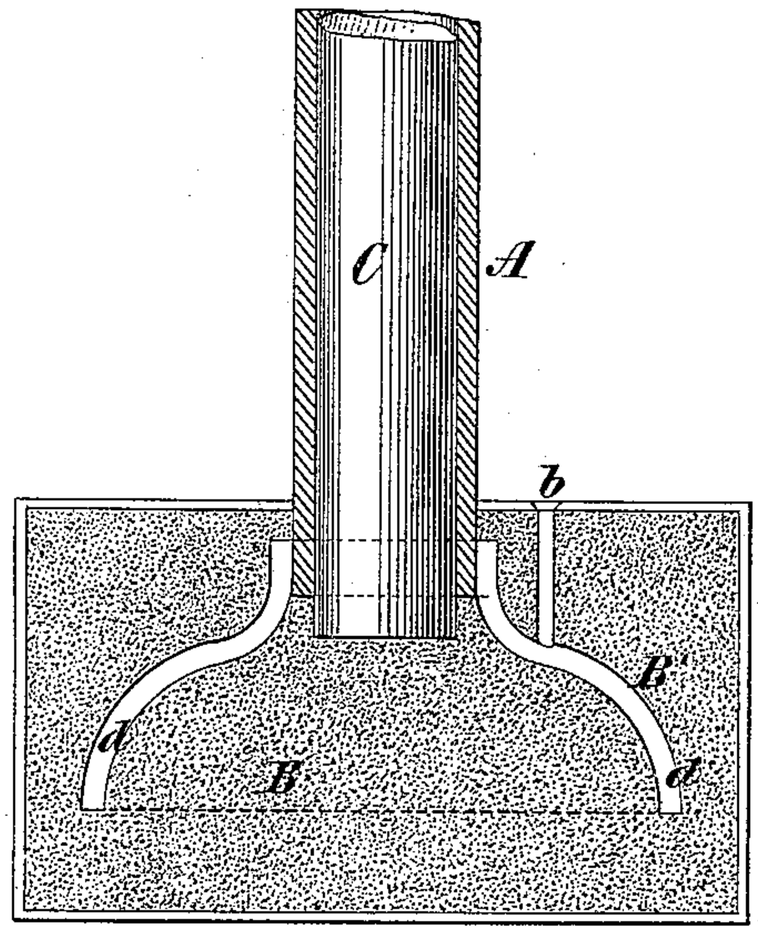


Fig. 1.

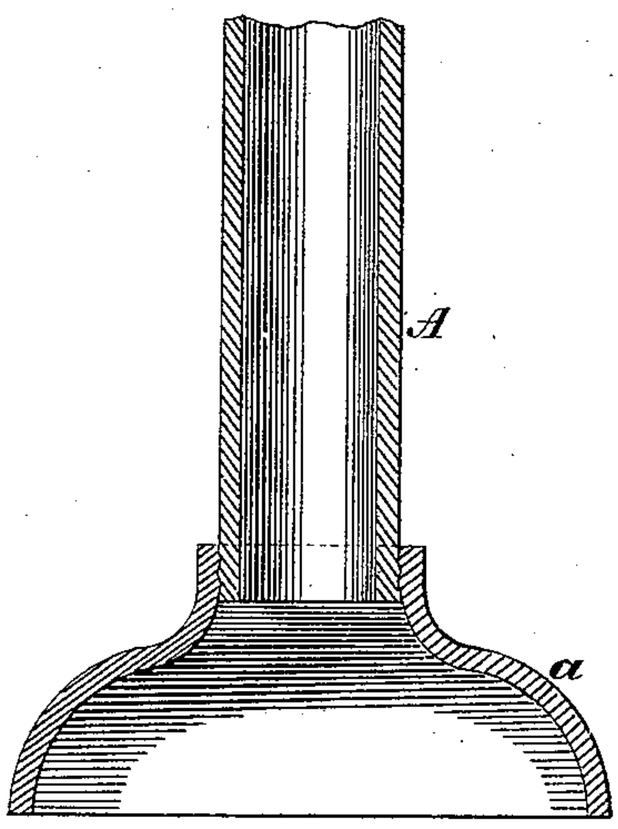
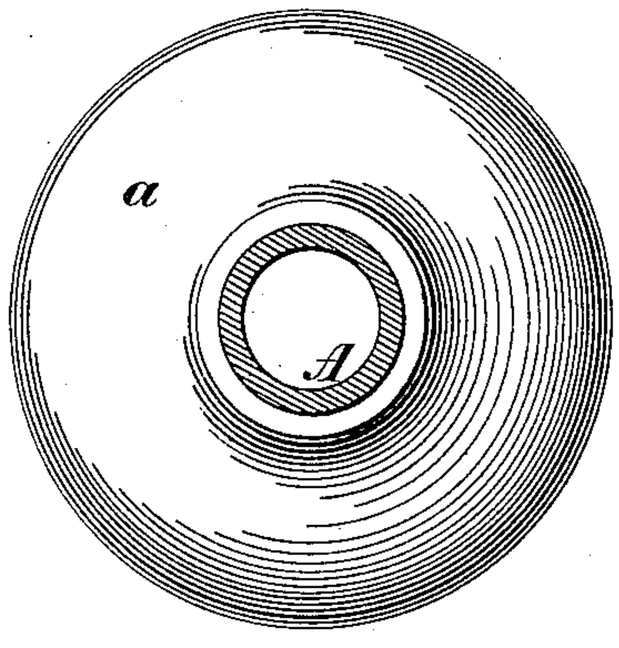


Fig. 3.



WITNESSES:

Gustave Dieterich.

F. F. Bourne.

INVENTOR.

Samuel E. Thomas.

BY

Briesen & Steele.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SAMUEL E. THOMAS, OF BROOKLYN, ASSIGNOR TO FRED ADEE & CO., OF NEW YORK, N. Y.

PIPE-CONNECTION.

SPECIFICATION forming part of Letters Patent No. 390,821, dated October 9, 1888.

Application filed January 18, 1888. Serial No. 261,106. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. THOMAS, a resident of the city of Brooklyn, Kings county, New York, have invented Improvements in Pipe-Connections, of which the following is a specification.

The object of my invention is to provide a wrought-lead pipe with a cast-metal plate or projection at one end, so that there shall be no leakage at the junction.

The invention consists in a wrought-lead pipe united at its end only directly to a cast plate or projection, as hereinafter more fully set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal central section of a wrought-lead pipe having a metal flange cast directly upon it. Fig. 2 is a longitudinal central section of a wrought-lead pipe inserted at one end into a mold and provided with a core. Fig. 3 is a top view of the pipe and attached casting shown in Fig. 1.

In carrying out my invention I take a wrought-lead pipe, A, and dip the end to receive the casting into or line it otherwise with molten tin. A portion of the tin adheres to the lead pipe and is allowed to chill thereon, forming a film of tin upon the pipe A. I next place the tinned end of the pipe A into a mold, B, which has been prepared in the form of the article to be cast, so that the pipe A forms part of the wall of the mold-cavity *d*, Fig. 2. The metal to be cast is then run into the mold through the ingate *b* and fills the mold B and surrounds the end of the pipe A which is within the mold-cavity, and by means of the tin on the pipe quickly adheres to the pipe and unites therewith. By causing the cast metal to unite with the wrought-lead pipe, as above described, I form a joint which will not become separated under the action of the weather, or rust, or by wear, as is so often the case when parts are joined by soldering; nor does my process affect injuriously the rest of said lead pipe.

To insure that the part of the pipe A within the mold B will not run and become separated when the melted metal is poured into the mold B and against the pipe A, I insert a core, C, of rigid iron, stone, or other suitable material, into the pipe A, Fig. 2, which core also allows the pipe when cooling to set in its original form.

In the drawings the casting from the mold B is shown in the form of a flange, *a*, on the pipe A, representing a portion of a water-closet discharge-pipe; but the article to be cast to the wrought-lead pipe A may be of any desired form; also, any desired form of mold may be used.

I prefer to use lead for the casting, although other metals may be used, if desired.

This process of uniting wrought-lead pipe to cast metal is applicable to casting flanges on water-closet pipes and in many other instances.

I have made application for a patent for the process of uniting wrought-lead pipe to cast metal herein described, which application was filed May 16, 1887, Serial No. 238,322.

Having now described my invention, what I claim is—

As a new article of manufacture, a wrought-lead pipe, A, united at its end only directly to a cast plate or projection, *a*, substantially as herein shown and described.

S. E. THOMAS.

Witnesses:
HARRY M. TURK,
GUSTAV SCHNEPPÉ.