

N. F. WESTON.
UNITING THE ENDS OF LEAD PIPES.
No. 66,658.

Patented July 9, 1867.

Fig. 5.

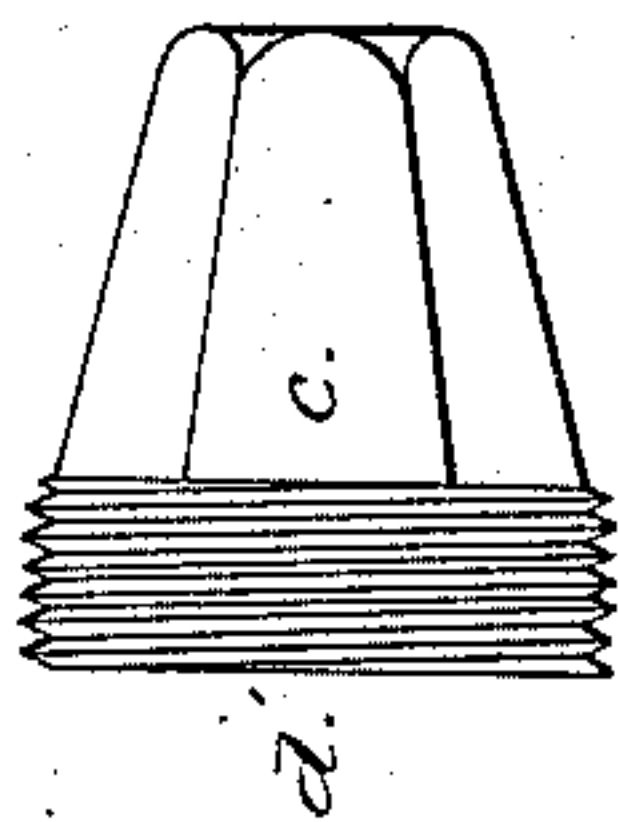


Fig. 3.

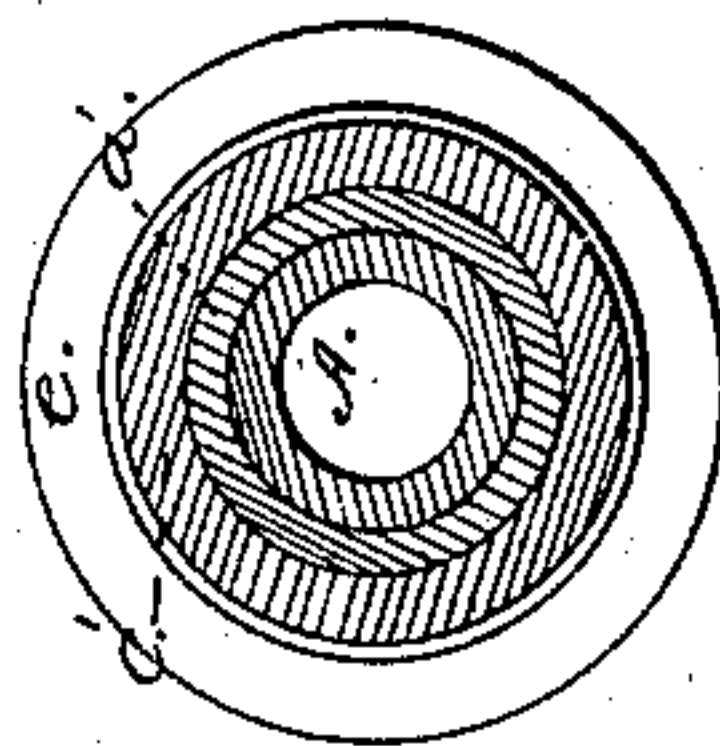


Fig. 4.

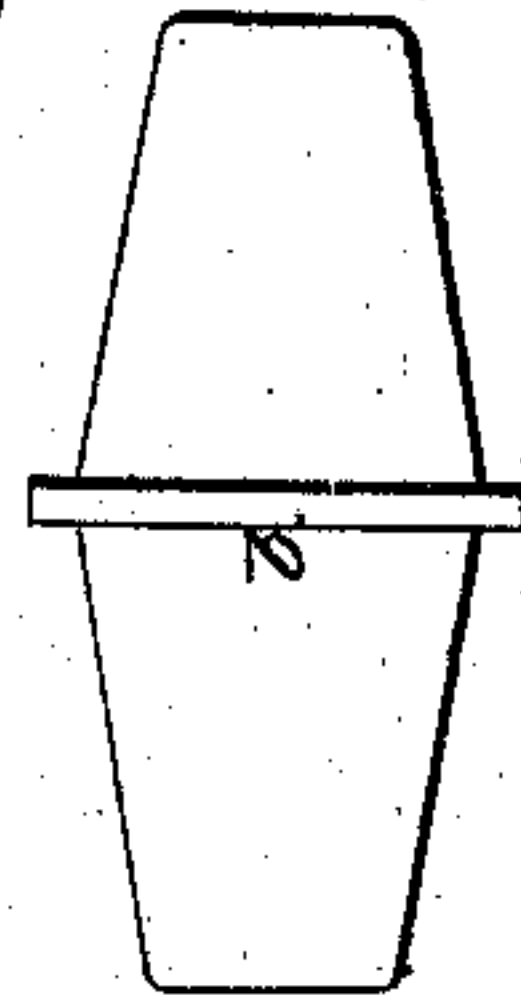


Fig. 1.

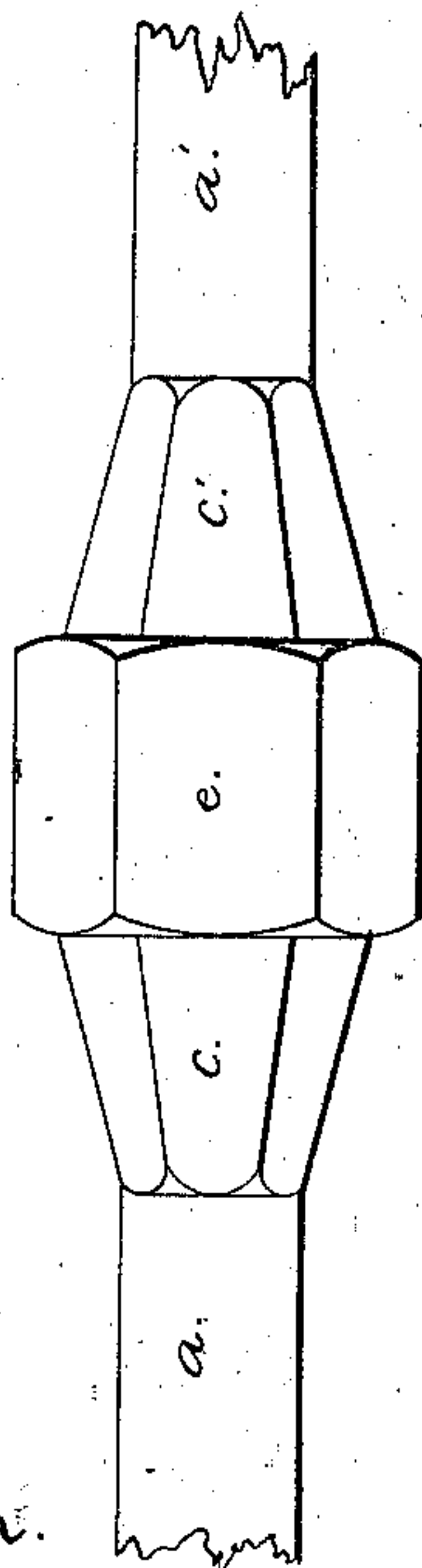
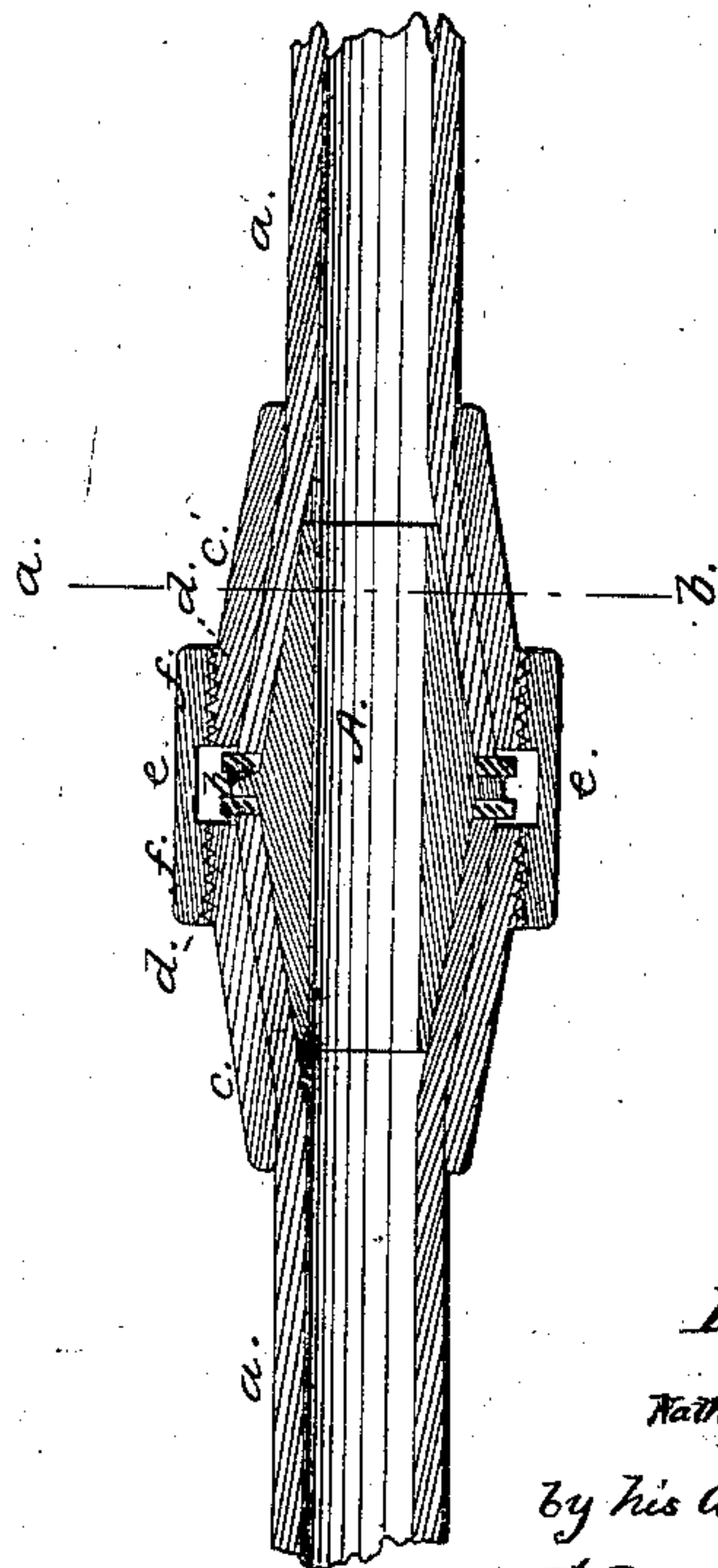


Fig. 2.



Witnesses:
Chas. H. Griffin.
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Inventor:
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NATHAN FOSTER WESTON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 66,658, dated July 9, 1867.

IMPROVEMENT IN UNITING THE ENDS OF LEAD PIPES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, NATHAN F. WESTON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a Device for Uniting or Joining the ends of Lead Pipe; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a side elevation.

Figure 2, a longitudinal section; and

Figure 3, a transverse section of my invention.

Figure 4 is a side elevation of the expanding-plug, to be hereinafter described.

Figure 5, being an elevation of one of the tapering-sleeves, constituting part of the invention.

In the practical operation of plumbing, it often becomes necessary to unite the ends of two portions of a lead pipe. This has formerly been done by the use of solder, a large mass of which is applied around the joint, requiring much time and an experienced person to accomplish it properly.

The object of my invention is to unite the ends of the pipe without the aid of solder, and in a very easy and expeditious manner, and by any person of ordinary intelligence.

The invention consists in a peculiarly formed coupling or connection-joint, which draws the two ends of the pipe firmly and tightly together.

In the drawings illustrating my invention, the two ends of the lead pipe are shown at *a a'*. The inner part of the coupling is composed of a hollow, cylindrical expanding-plug, *A*, in form composed of two conic frusta, united at their larger bases in a ring or lip, *b*, circumscribing the middle of the circumference of the plug so formed. Two cylindrical tapering-sleeves *c c'*, for receiving the ends of the pipe, which are inserted within them through their smaller apertures, these sleeves having screw-threads *d d'* cut upon a portion of their outer peripheries, one being a right and the other a left-handed screw. A nut, *e*, having female screws *f f'* corresponding to the male screws *d d'*, is to be screwed upon the sleeves *c c'*.

The operation of applying the above-described device is as follows: The sleeves *c c'* are to be passed over the ends of the pipe, small end first, to about their whole length, and the end of the pipe subsequently spread out to fill, or partially fill, the interior of the sleeves, the nut *e* at this time being partially screwed upon one of them. One end of the expanding hollow-plug *A* is then to be inserted in either of the sleeves, or the ends of the pipe enclosed by them, and the nut *e* screwed upon both of them. The plug *A*, during the operation of screwing up the nut *e*, performs a twofold purpose: it expands the lead pipe tightly within the sleeves, and at the same time forces the two ends of the pipe up against the ring *b*, or against washers or packings placed on each side of it.

The above-described device forms a very strong and perfectly tight joint. It can be applied very expeditiously, and by a person not at all conversant with the business of plumbing. In addition to this, the actual expense of applying it is considerably less than by the soldering process.

I claim the device for uniting the ends of lead pipe and dispensing with the use of solder, consisting of the hollow expanding-plug *A*, sleeves *c c'*, and nut *e*, combined and operating together, substantially as before described.

NATHAN FOSTER WESTON.

Witnesses:

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