

O. COLLINS.
PLUMBERS' PIPE-JOINT.

No. 176,283.

Patented April 18, 1876.

Fig. 1.

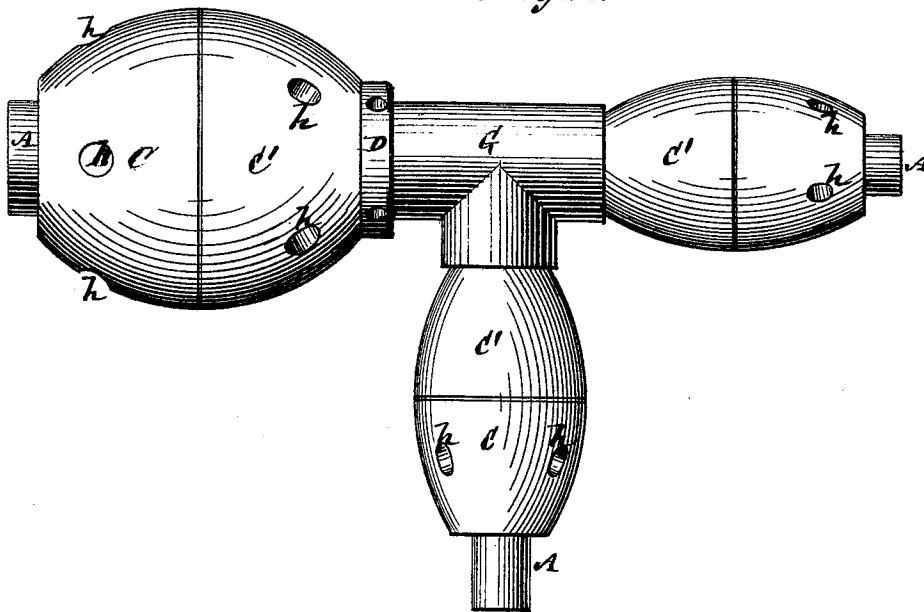
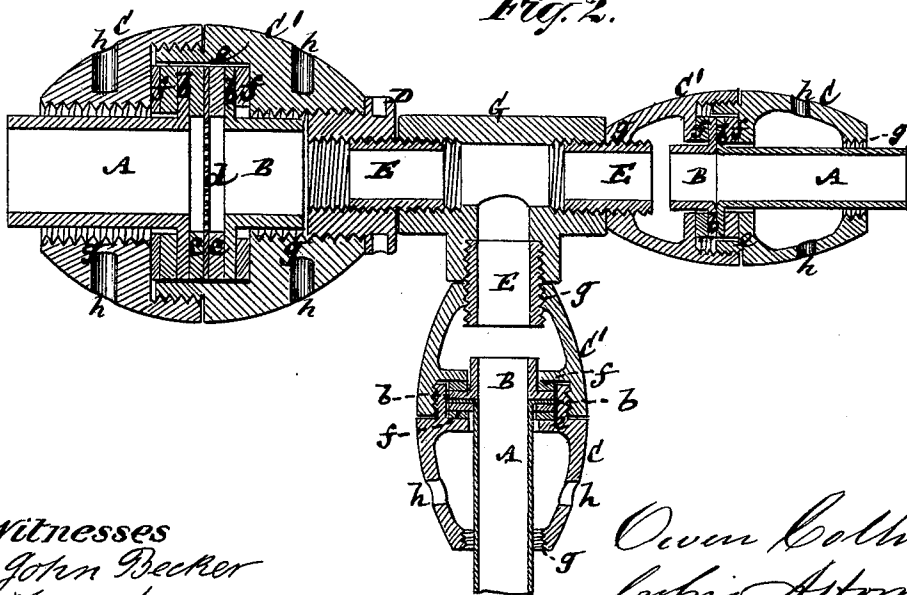


Fig. 2.



Witnesses
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IMPROVEMENT IN PLUMBERS' PIPE-JOINTS.

Specification forming part of Letters Patent No. **176,283**, dated April 18, 1876; application filed February 21, 1876.

To all whom it may concern:

Be it known that I, OWEN COLLINS, of the city, county, and State of New York, have invented certain new and useful Improvements in Plumbers' Pipe-Joints; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to union-joints or pipe-couplings for uniting with facility, and in a close and strong manner, without the use of solder, lead or other soft-metal pipes, or of uniting soft-metal pipes with iron or other hard-metal pipes, and of uniting pipes of different sizes or diameters, a like facility being obtained for the detachment as for the attachment of the pipes.

The invention consists in certain novel constructions and combinations of parts, including a transversely-divided screw-coupling, the sections of which not only screw into one another, but receive the flaring or flanged ends of the pipes to be connected within them, and have interior end screw-threads, to connect with additional pipes, or screw-thimbles receiving the additional or connecting pipes within them.

In the accompanying drawing, Figure 1 represents an exterior longitudinal view of a tripartite pipe-coupling constructed in accordance with the invention, and Fig. 2 a longitudinal section of the same.

Referring, in the first instance, to the application of the pipe-coupling as shown to the left hand of the drawing, A and B represent two portions or sections of lead or other soft-metal pipe which it is required to unite by the divided screw-coupling C C'. These pipes A B are flared or bent outwardly at their adjacent ends, forming flanges *b b*, between which one or more packings, *c*, and, if desired, an intermediate strainer, *d*, may be arranged. The screw-coupling C C', which may be of a prolate-spheroidal or other form, is divided transversely, and fitted so that its one half or section screws into the other, and is constructed to form an interior chamber, *e*, to receive within it the flanges or flared ends *b b* of the pipes, the packings *c*, the strainer *d*, also packings *f* on the backs of the flanges,

so that, on screwing up the coupling-sections C C', the several packings, which may be of any suitable soft and flexible material, relieve all contact of metal with metal. The coupling-sections C C' have end screw-threads *g g* within them of a larger diameter than the pipes A B, to admit of receiving over the latter, and of screwing into the coupling-sections, either additional pipes direct, or an externally and internally screw-threaded thimble, D, into which the connecting or additional pipe E, of a less diameter than the pipes A B, is screwed.

The pipe-sections A B are screwed up or unscrewed, when it is required to make or break the joint, by simply inserting a pin or rod in any of a series of holes or cavities, *h*, in said sections. The thimble D may be similarly operated.

The coupling shown to the right hand of the drawing is of similar construction, excepting that the coupling-sections C C' are hollow, and the holes *h* made through them; also the flared ends of the pipes A B are brought in contact, with packings only at their backs, and the internal end screw-threads *g g* of the coupling-sections are made to screw direct onto the additional or connecting pipe E at the one end of said coupling, while the other end of the latter is constructed to receive the screw end of a pipe outside of the pipe A within it.

In the tripartite arrangement shown in the drawing, in which three couplings are used, the one of them being intermediate, and at right angles to the others, the right and left hand pipes or sections of pipes E E are connected by a T screw-coupling, G, and the latter has applied to it a union-coupling with pipes, substantially as represented in Fig. 2, excepting that the pipe A of the intermediate coupling is supposed to be a hard-metal one, and double packings *f* are applied to the back of its inner end flanged.

The coupling-sections C C' may be made of cast-iron, and the whole coupling device be made to combine cheapness with strength.

I claim—

1. The combination of the transversely divided of male and female screw coupling C C', formed with an interior chamber, *e*, and having interior end screw-threads *g*, with the end

flared or flanged pipe-sections A B, and packings within the chamber *e*, substantially as specified.

2. The combination of the internally and externally screw-threaded thimble D with the internally-chambered and transversely-divided screw-coupling CC', having interior end screw-

threads *g*, and the pipes or pipe-sections A B, essentially as described.

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Witnesses:

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