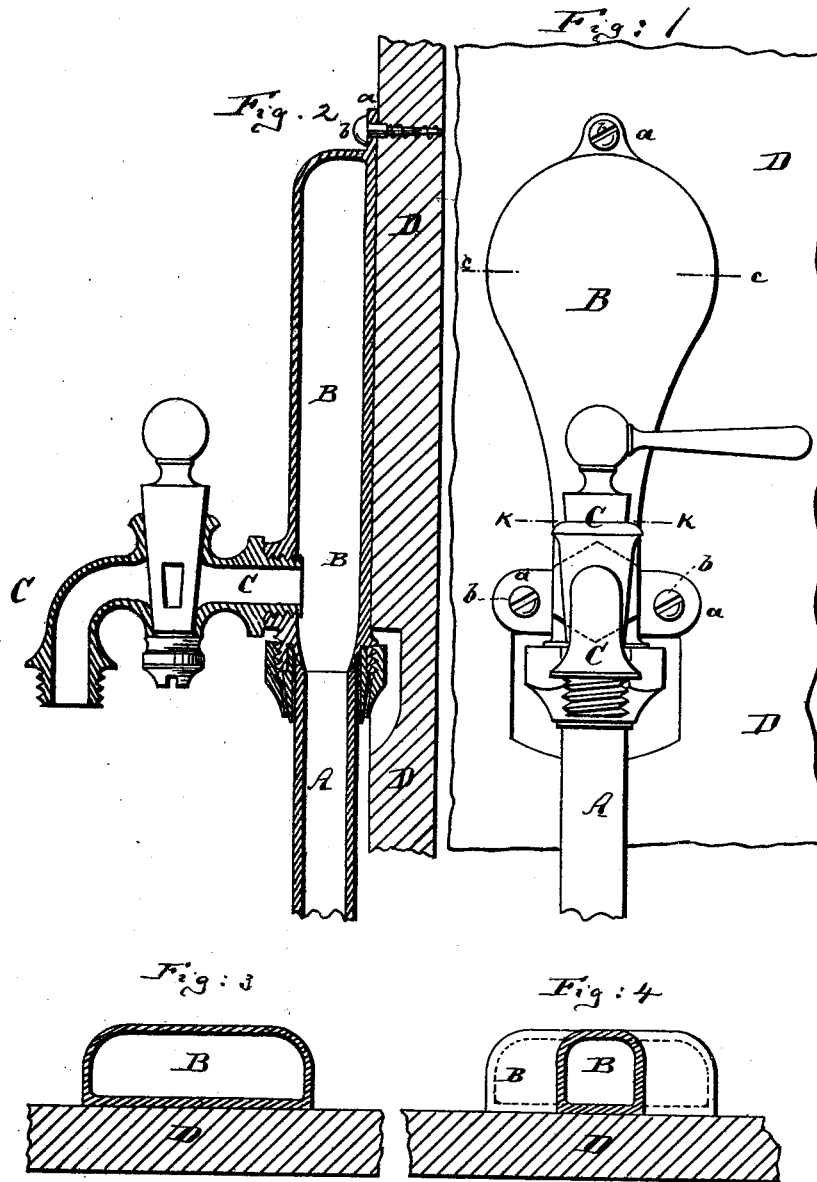


H. PENNIE.

AIR-CHAMBER ATTACHMENT TO WATER-PIPES.

No. 185,645.

Patented Dec. 26, 1876.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

HENRY PENNIE, OF BROOKLYN, ASSIGNOR TO HIMSELF AND JAMES L. SHARP, OF NEW YORK, N. Y.

IMPROVEMENT IN AIR-CHAMBER ATTACHMENTS TO WATER-PIPES.

Specification forming part of Letters Patent No. 185,645, dated December 26, 1876; application filed October 24, 1876.

To all whom it may concern:

Be it known that I, HENRY PENNIE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Air-Chamber Attachment to Water-Pipe, of which the following is a specification:

Figure 1 is a face view of my improved air-chamber attachment to water-pipe; Fig. 2, a vertical transverse section of the same; Figs. 3 and 4, horizontal sections thereof on the plane of the line C C and K K, Fig. 1, respectively.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to supply the cocks or faucets used on water-pipe, over kitchen-sinks, bath tubs, and the like, with an air-chamber, which will allow the water, when the cock is rapidly closed, to compress the air and thus spend its momentum without affecting the cock.

As at present constructed, the water rushing out through a cock will, when the cock is rapidly closed, in its attempt to continue its flow, bear against the cock and produce the rattling noise so well known, and a consequent motion of the cock or valve, by which the same is greatly injured. In order to avoid this injury, it has been common to extend the pipe a short distance above the cock and thereby form an air-chamber having the same diameter throughout as the water-pipe. Such narrow air-chamber does not overcome the difficulty pointed out, as the column of air therein is too long to allow of its compression with sufficient rapidity.

Now, my invention consists in the construction of an air-chamber which is enlarged laterally, so as to produce a short column of air, but one of requisite capacity, close above the faucet. The invention also consists in providing such air-chamber with a flat back, so it can be fastened against the wainscoting of a room, or against the back of a sink or other flat board. It also consists in providing said air-chamber with lugs for the reception of fastening-screws, as hereinafter pointed out.

In the drawing, the letter A represents a water-pipe; B, my improved air chamber, and C a kitchen-faucet. The air-chamber B is at its upper part enlarged, so that it will have the desired capacity, and yet contain but a short column of air. The back of this air-chamber is made flat, as shown in Figs. 3 and 4, so that it will fit properly against the face of the wooden board D, to which it is secured. By flat, in this connection, I mean not convex, as it is clear that the air-chamber may be caused to properly bear against the board D if its back were made more or less concave, or even corrugated. The air-chamber will be usually constructed of cast metal, and made with projecting lugs *a a*, through which the fastening screws or pins *b*, that secure it to the board D, are passed. The lower end of the air-chamber B is perforated, to connect by suitable joint to the water-pipe A, and in front it is also perforated, to connect by suitable joint with the faucet C.

By the use of this air-chamber the faucet will be protected against injury, as when the cock is rapidly closed the water will compress the air in the chamber B and not bear against the cock or faucet in an injurious manner, the air-column being sufficiently short and wide to yield to the action with proper rapidity.

I claim as my invention—

1. The combination, with the pipe A and faucet C, having a stop-cock, of the air-chamber B, communicating at the lower end with the pipe, at the side with the faucet, and enlarged laterally above its point of communication with the faucet, substantially as set forth.

2. As a new article of manufacture, the air-chamber B, adapted for attachment to the pipe A, detachable faucet C, and supporting-board D, provided with a flat back fitting the flat face of the said board, as specified.

HENRY PENNIE.

Witnesses:

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