

(No Model.)

H. PATTERSON.

AIR COCK FOR STEAM RADIATORS.

No. 274,650.

Patented Mar. 27, 1883.

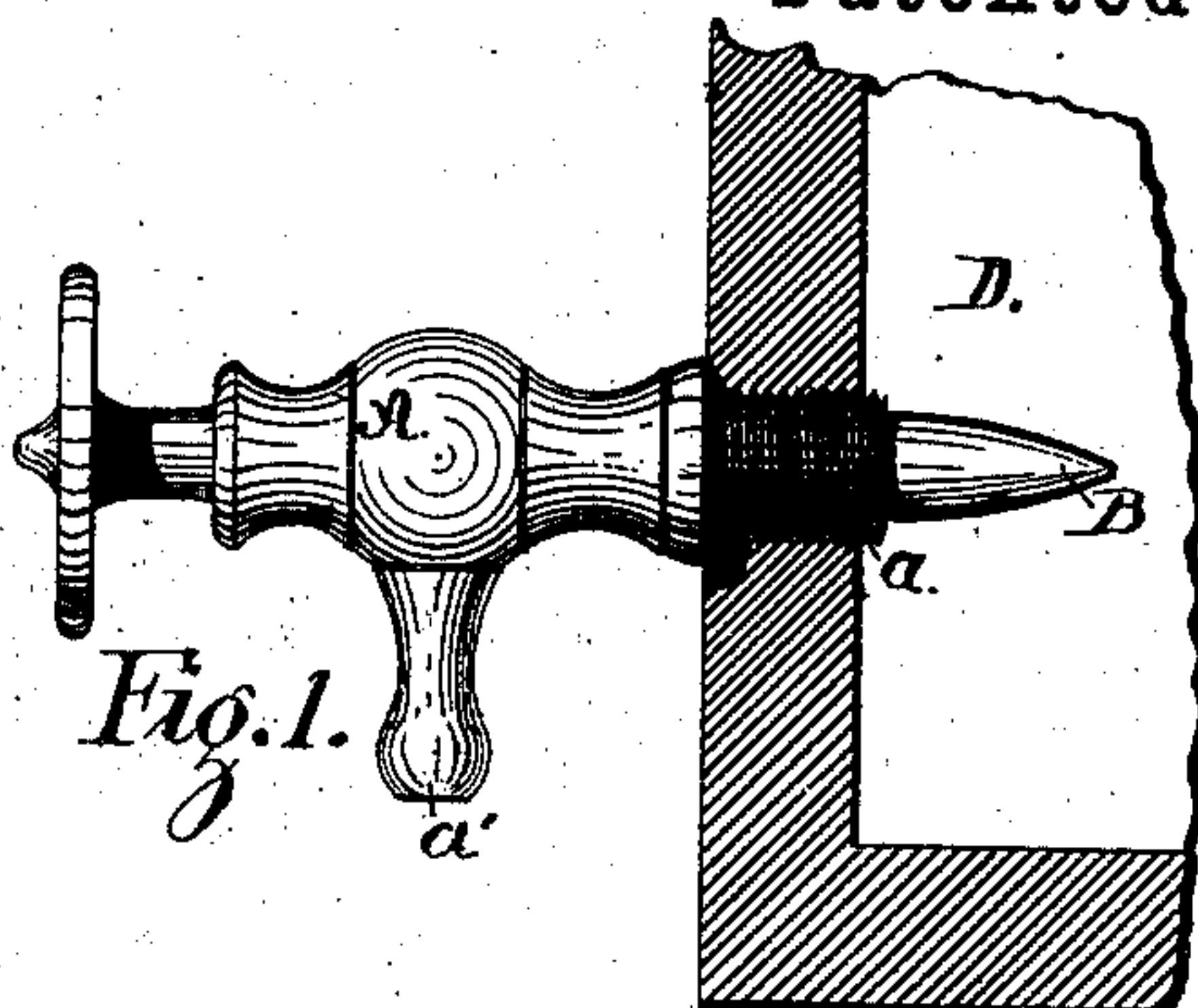


Fig. 1.

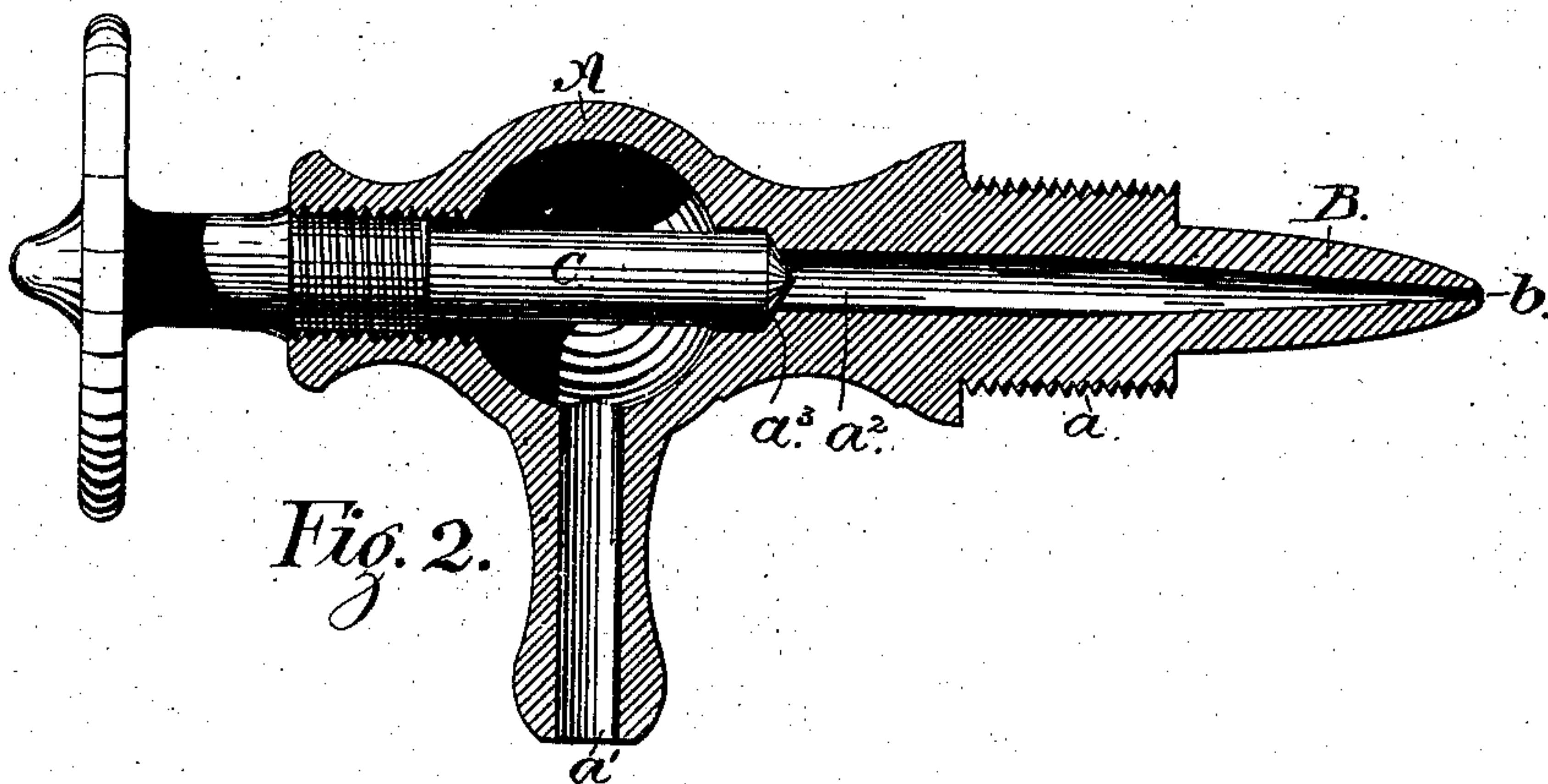


Fig. 2.

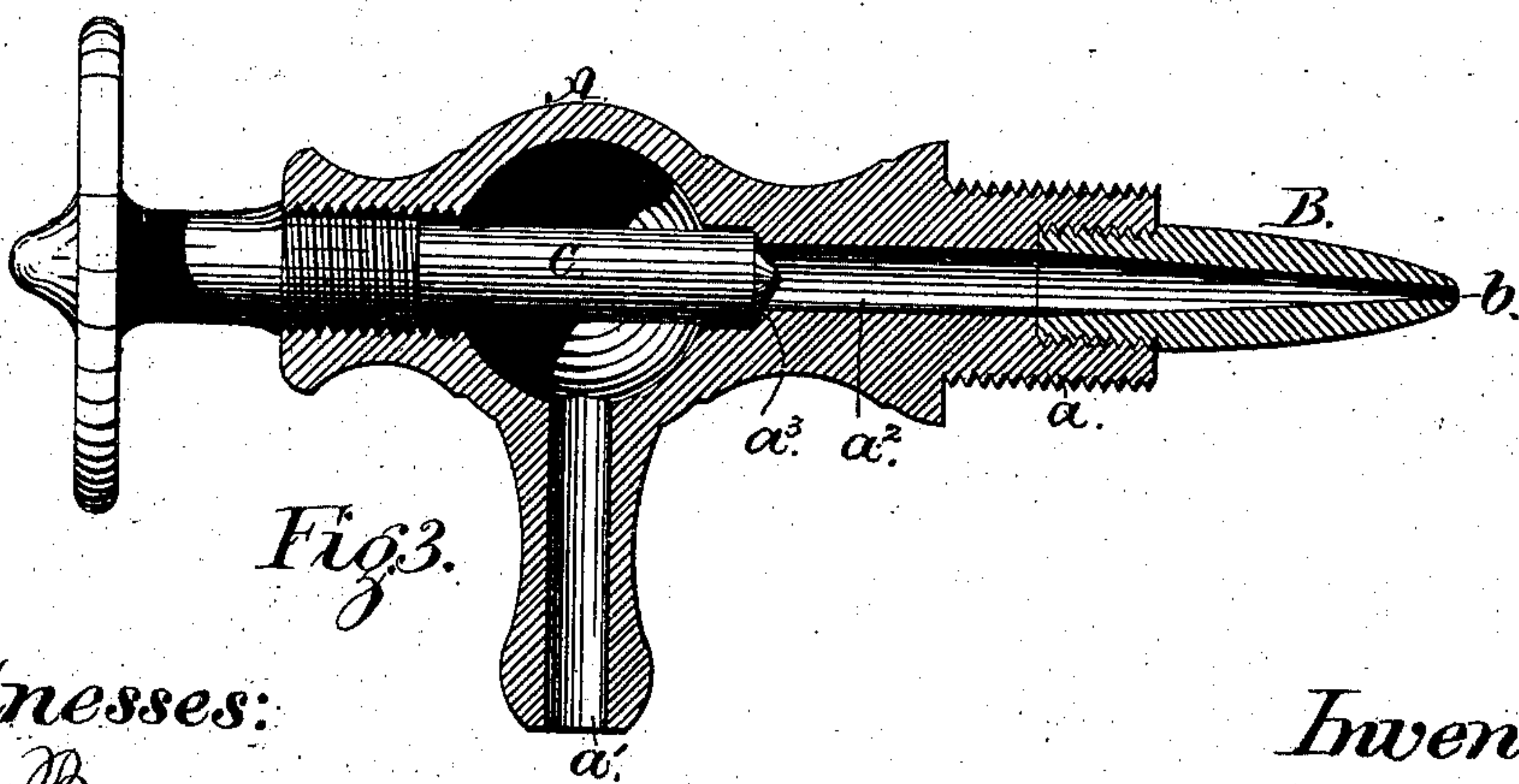


Fig. 3.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

HUGH PATTERSON, OF ALBANY, NEW YORK.

## AIR-COCK FOR STEAM-RADIATORS.

SPECIFICATION forming part of Letters Patent No. 274,650, dated March 27, 1883.

Application filed January 22, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HUGH PATTERSON, of the city and county of Albany, in the State of New York, have invented certain new and useful Improvements in Air-Cocks for Steam-Radiators, &c., of which the following is a specification.

My invention relates to that class of cocks that is usually employed for permitting the air, which will naturally accumulate in steam-radiators, to escape therefrom; and it consists in constructing or providing the inner end of such cocks with a coniform point, whose apex is pierced with a minute opening, which, as it extends outward toward the valve-seat, expands in diameter. The said opening forms an outlet-passage, through which the air contained in the radiator can escape without carrying with it any appreciable quantity of water. I have learned, by experimenting with this class of cocks, that water condensed from the steam in radiators will rapidly accumulate on the end of an air-cock having the ordinary blunt or square-cut inner end, and then, as this water trickles down over the end of the cock and approaches the outlet-opening, the escaping air-current will carry it along through the air-cock and discharge it against anything that stands in its course, thereby producing a very annoying and unnecessary nuisance. By means of the coniform point of my improved air-cock the condensation is conducted away from the air-opening in its apex, and by means of the expanded diameter of the air-escape passage the velocity of the escaping air is so greatly reduced that it will lack energy to create a current of sufficient force to carry with it any significant quantity of water.

In the accompanying drawings, which form part of this specification, and to which reference is made herein, Figure 1 is a side elevation of an air-cock containing my improve-

ments; Fig. 2, an enlarged longitudinal section of same when the coniform point is made integral with the body-piece of the cock; and Fig. 3, a like section, showing the coniform point made of a separate piece.

As represented in the drawings, A is the body-piece of the cock, provided with the usual screwed portion, *a*, for securing it in place, and a discharge-nozzle, *a'*. At its inner end, beyond the screwed portion *a*, a coniform point, B, is formed on or attached to said body-piece in such manner that its entire length will come inside the metallic casing and extend into the steam-space D or chamber of the radiator. In the apex of said coniform point a very minute opening, *b*, is formed, and as it extends inwardly its diameter is expanded until it conforms to the longitudinal bore *a*<sup>2</sup> of the body-piece, thereby forming beyond the opening *b* an expanding-chamber to reduce the density and velocity of the escaping current of air.

The screw-valve C has its inner end fitted to form an air-tight joint with the valve-seat *a*<sup>3</sup> of the body-piece in the usual manner of constructing such cocks; but, when preferred, an ordinary turnkey may be substituted for a screw-valve.

I claim as my invention—

That improvement in air-cocks for steam-radiators, &c., which consists in providing the inner end of the body-piece A with a coniform point, B, having a minute outlet air-opening, *b*, in its apex, said outlet-opening being increased in diameter until it conforms to the longitudinal bore *a*<sup>2</sup> of the body-piece, so as to form an air-expanding chamber between the opening *b* and the valve-seat *a*<sup>3</sup>, as and for the purpose herein specified.

HUGH PATTERSON.

Witnesses:

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