

W. H. McDONALD.
Filtering Faucet.

No. 231,923.

Patented Sept. 7, 1880.

Fig. 1.

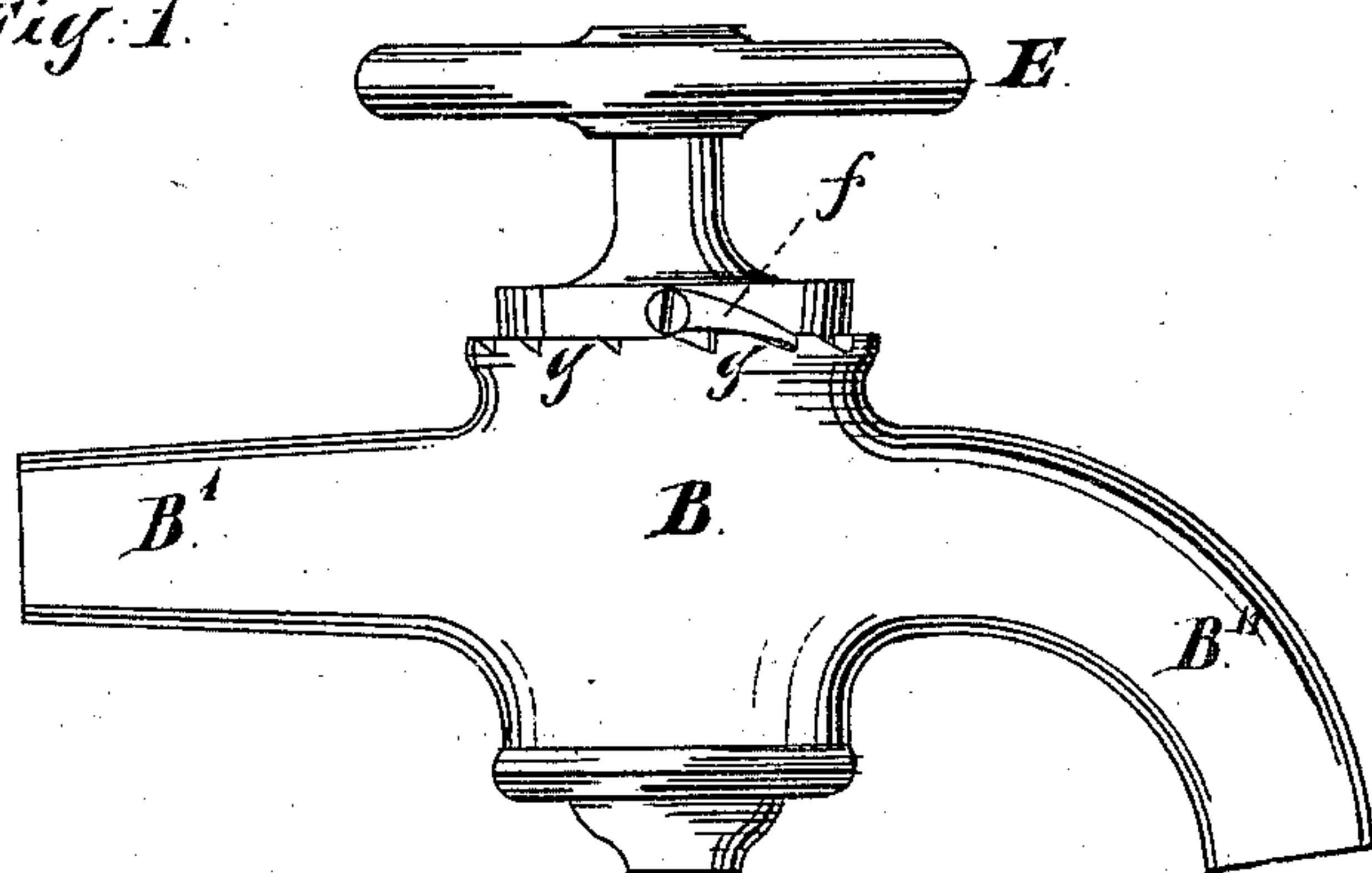


Fig. 5.

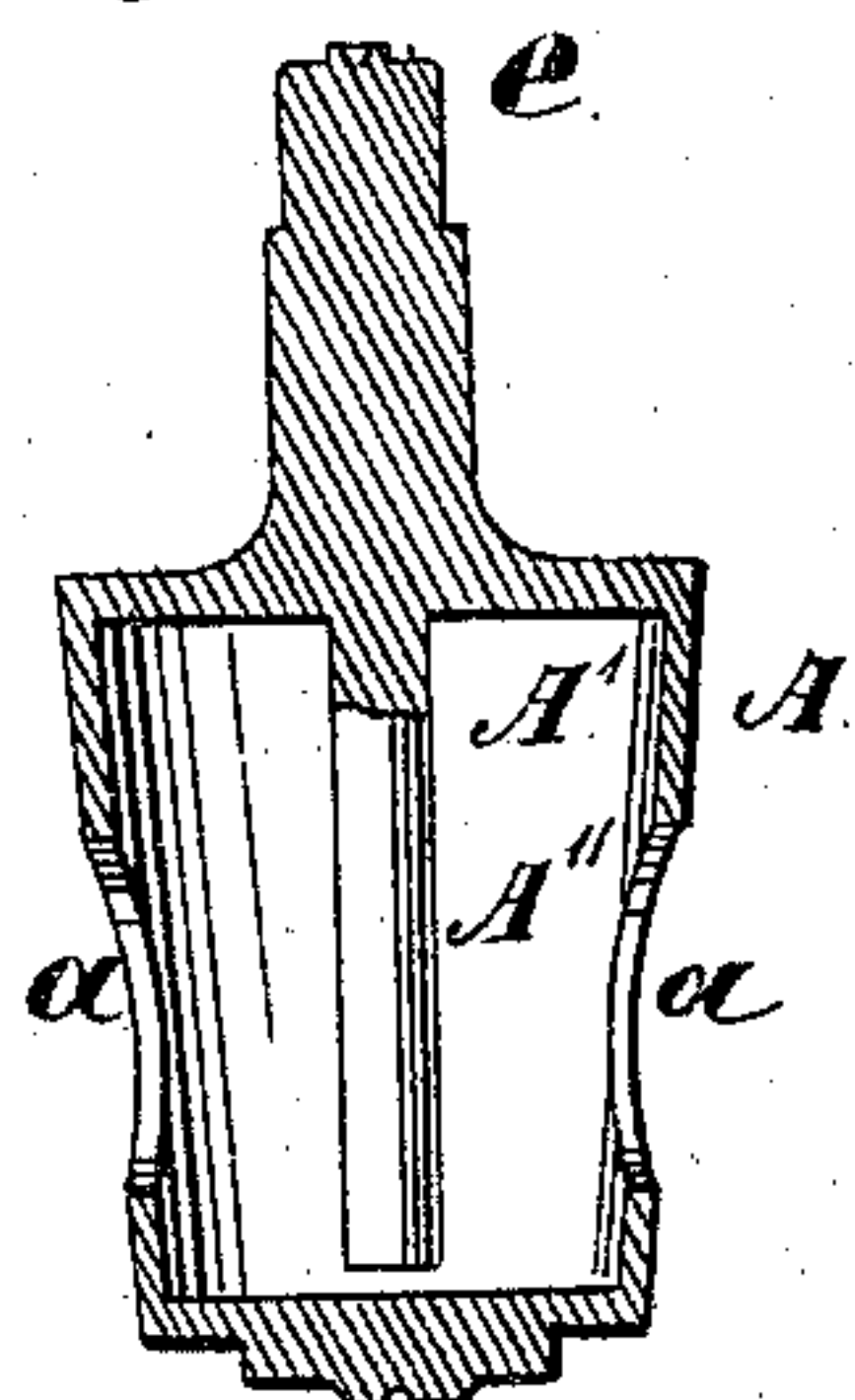


Fig. 4.

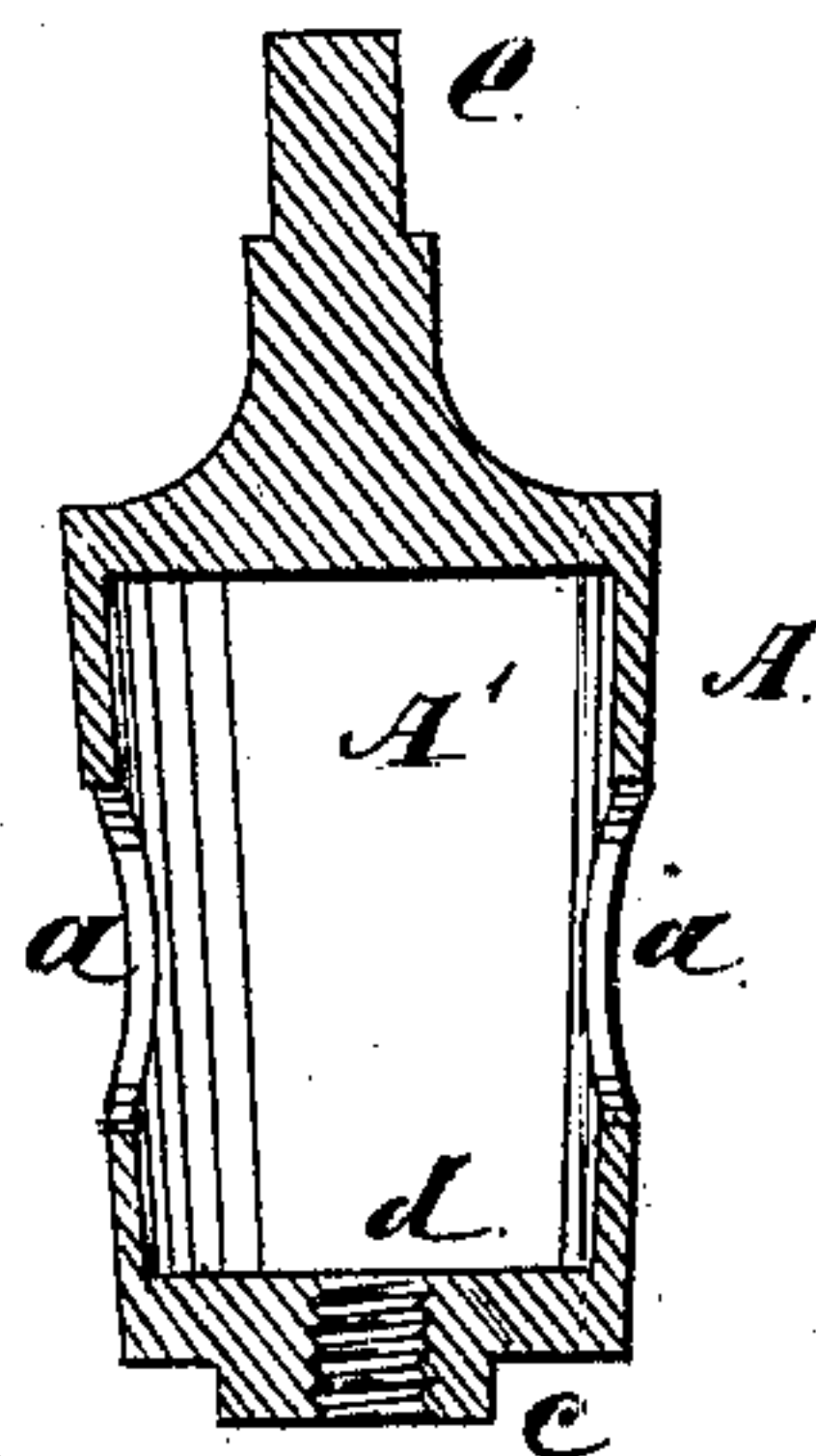


Fig. 2.

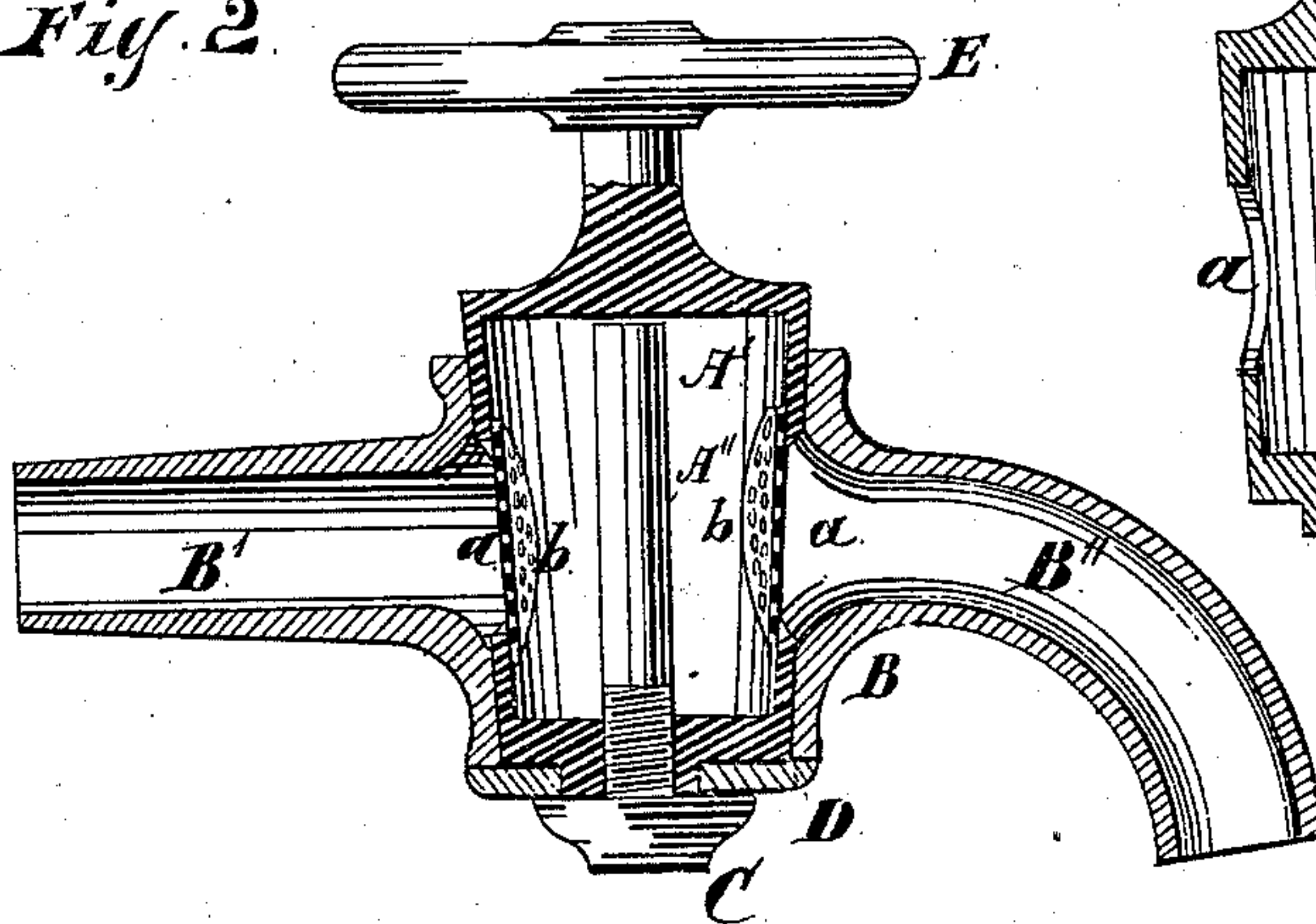
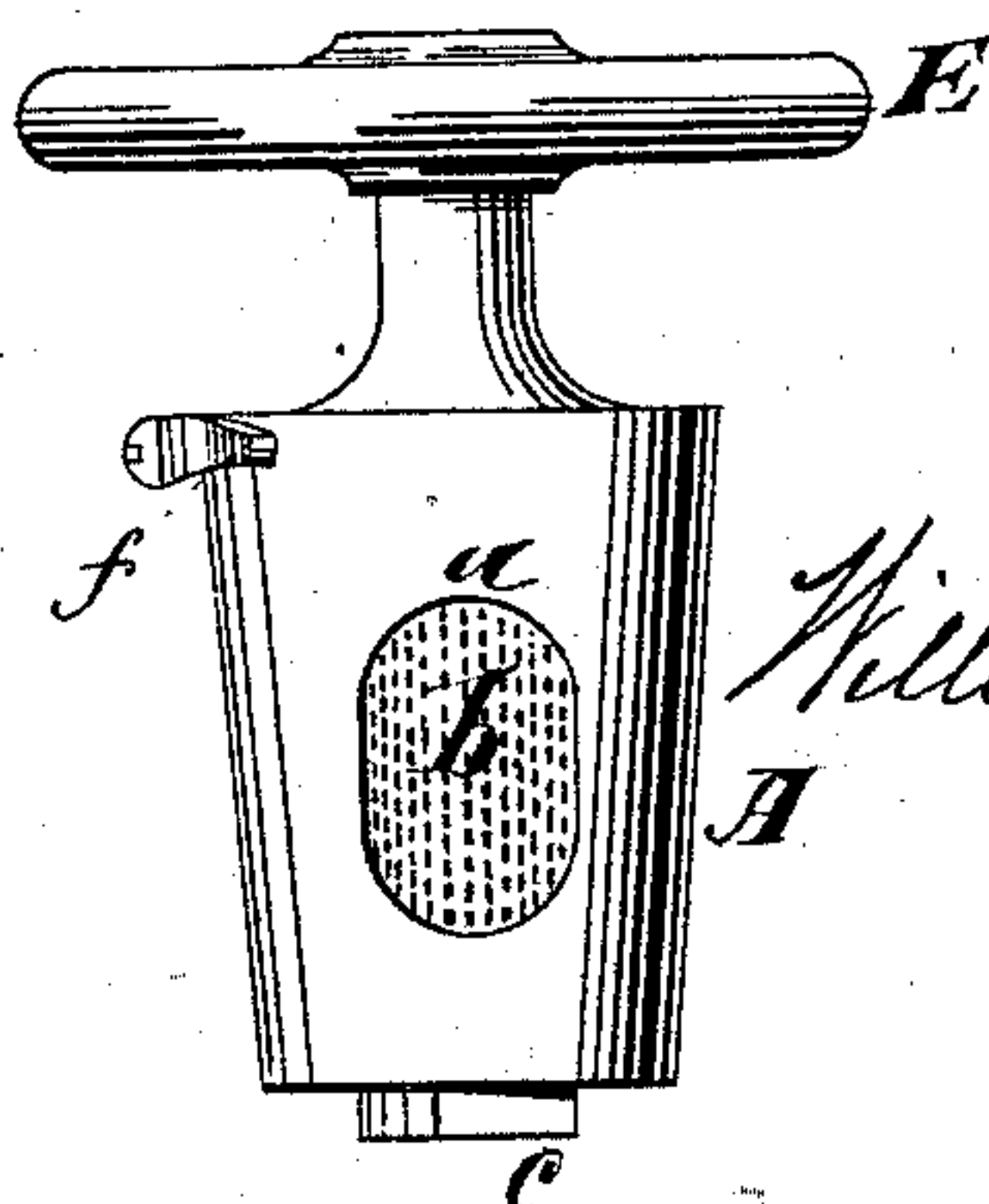


Fig. 3.



Witnesses:
O. B. Bond
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM H. McDONALD, OF CHICAGO, ILLINOIS.

FILTERING-FAUCET.

SPECIFICATION forming part of Letters Patent No. 231,923, dated September 7, 1880.

Application filed November 25, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. McDONALD, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Filtering-Faucets, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, a vertical longitudinal section; Fig. 3, a side elevation of the plug; Fig. 4, a vertical section of one form of plug; Fig. 5, a vertical section of a plug having the central core cast therewith.

This invention relates to that class of filtering-faucets which have a filtering-chamber located in the faucet-plug and containing a filtering material, preferably siliceous, through which the water passes as it is discharged, and has for its object the filtration of water as it is drawn through a faucet, so that when discharged it will be free, or nearly so, from foreign substances; and its nature consists in providing a central core or stem located in the filtering-chamber of the plug in such relation to the inlet and outlet openings for the water as to cause the water, in its passage through the plug, to be divided for the purpose of bringing it into contact with a greater filtering-surface; and in providing a pawl located on the plug and engaging with ratchet-teeth on the faucet-barrel, so that the plug will be revolved in the same direction for cleaning purposes.

In the drawings, A represents the plug, cast from brass or other suitable material so as to have an exterior conical shape, and an interior chamber, A', to receive the filtering material.

B is a barrel or casing adapted to receive the plug A and furnish a bearing therefor. B' is the inlet and B'' the outlet portions of the faucet, which portions are cast from brass or other suitable material in a single piece with the barrel or casing B, as shown in Figs. 1 and 2.

Openings *a* are formed through the shell of the plug on opposite sides thereof, so as to be in line the one with the other and form inlet and outlet openings for the chamber A', which openings *a* are so located with reference to the openings or mouths of the inlet B' and outlet

B'' as to coincide therewith when brought in line, so that the water can flow through the filtering-chamber A', and the solid portion of the shell of the plug A between the openings *a* effectually shuts off the flow of water by closing the opening from the inlet B'. The openings *a* are partially closed by a wire-gauze, *b*, stretched across the openings and secured in place by solder or in any other suitable manner, which gauze catches the heavier or larger particles of sediment and prevents them from entering the filtering-chamber.

C is a screw entering a screw-threaded opening, *d*, in the bottom of the plug A for securing the plug in the barrel or casing B.

D is a plate or disk of the same diameter as the bottom of the barrel B, and having a suitable opening for the reception of a stud or projection, *e*, on the bottom of the plug A, so as to unite the plate and plug in a firm manner, so that they will revolve together. This plate D furnishes a bearing for the lower end of the plug and prevents its withdrawal, and the screw C passes through this plate, and has its head in contact with the outer face thereof.

E is a wheel or handle socketed in the stem *e* of the plug, by means of which the plug is turned.

The chamber A is to be filled with a filtering material, preferably siliceous, and for the best results a central core or stem located in the chamber A' is to be provided, which stem or core A'' may be an extension of the screw C, as shown in Fig. 2, or may be a solid center cast with the plug, as shown in Fig. 5. This central core or stem, A'', divides the stream of water which enters the chamber, causing it to flow around such stem or core and be brought in contact with a larger filtering-surface.

A pawl, *f*, is pivoted to the face of that portion of the plug which projects above the barrel, and the upper edge of the barrel has a series of ratchet-teeth, *g*, with which the pawl *f* engages, the object being to prevent a reverse movement being given to the plug and insure its being always turned in the same direction, so as to bring the openings *a* in position to be alternately filling and discharge openings, for the purpose of cleaning such openings from any sediment or impurities caught by the wire-gauze *b*.

The chamber A' can be filled through the opening c, or a suitable opening closed by a cap may be provided for this in top of the plug.

5 The barrel or casing B may be closed at the bottom, in which case the plug A can be secured in place by a screw cap on top. This construction would prevent the danger of any leakage at the bottom.

10 The plug A should be of a sufficient size, so that an interior chamber can be formed therein having a capacity to receive a quantity of filtering material that will effectually filter the water in its passage through the chamber.

15 In use the water passes through the inlet B' into the chamber A' through the opening a, passes through the chamber, and at the opposite opening a into the discharge B'', being subjected to the action of the filtering mate-

rial while in its passage through the chamber A', so that it will be discharged in a filtered 20 condition.

What I claim as new, and desire to secure by Letters Patent, is—

1. A faucet-plug having an interior chamber with a central vertical stem or core, around 25 which a filtering material is placed, substantially as and for the purposes specified.

2. The plug A, having a filtering-chamber, A', and carrying a pawl, f, in combination with a barrel, B, having ratchet-teeth g, for prevent- 30 ing a reverse movement of the plug, substantially as and for the purposes specified.

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Witnesses:

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