

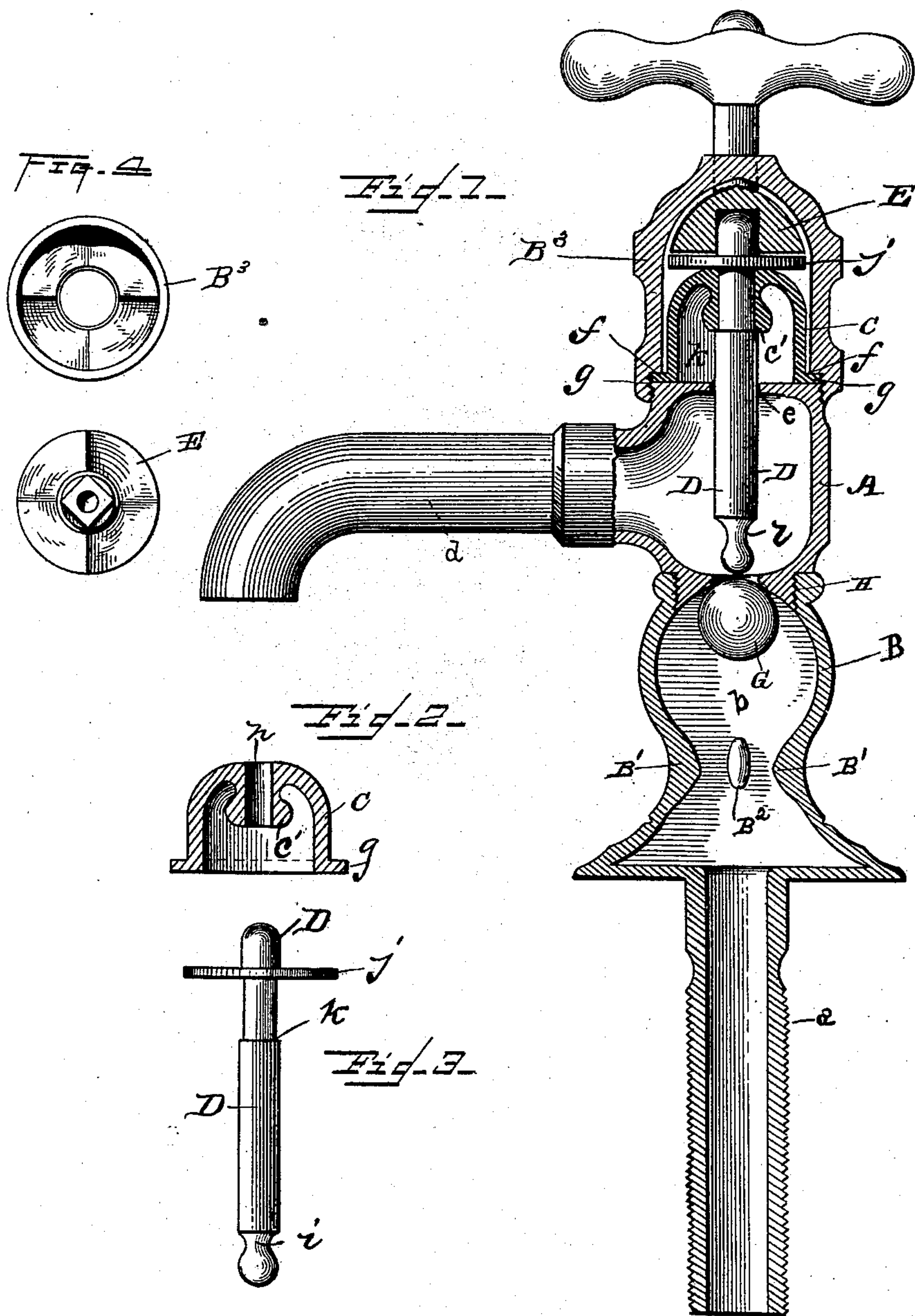
(No Model.)

J. M. ANDERSON.

# WATER COCK.

No. 376,129.

Patented Jan. 10, 1888.



**WITNESSES**

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# UNITED STATES PATENT OFFICE.

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## WATER-COCK.

SPECIFICATION forming part of Letters Patent No. 376,129, dated January 10, 1888.

Application filed May 5, 1887. Serial No. 237,232. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MILTON ANDERSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Water-Cocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to water-cocks, the object of the invention being to provide a novel construction of packing designed to be located above the discharge nozzle of said cock and designed to prevent the liquid from escaping through the upper end of the cock, at which point the operating-handle is located.

A further object of the invention is to combine with a cock having a spherical valve a novel construction of stem for forcing said valve from its seat.

A further object of the invention is to provide improved means for supporting the spherical valve when water-pressure for any reason whatever is removed therefrom.

The invention consists in the features of construction and combinations of parts, herein-after fully described and claimed.

In the drawings, Figure 1 is a vertical sectional view of a water-cock embodying my invention. Fig. 2 is a detail view of the packing, and Fig. 3 is a detail view of the stem. Fig. 4 is a detailed inverted plan view of the top of the casing and a plan view of the cam.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings, A represents the body of the faucet, which, as shown, is constructed in three sections connected by threaded joints. The lower section, B, is provided with a threaded shank or extension, *a*, and an interior chamber, *b*, which is narrowed, as at B', and is provided adjacent to said narrowed portion with lugs B<sup>2</sup>, of which there may be as many as desired, though three have been found to answer all purposes.

The central section, A, has an opening in its lower end, which opening is adapted to be closed by a spherical valve, preferably of rubber, which rests against a turned seat in A, and said valve, when water-pressure is removed

from it, is adapted to be supported by the lugs B<sup>2</sup>, thus allowing air to pass the ball when the water is turned off. The central section, A, has an eduction-opening in which is secured an eduction-pipe, *d*, and said central section is provided at its upper end with a centrally-located opening, *e*. The upper section, B<sup>3</sup>, carries the handle and is provided at its lower end with an interior ledge or shoulder, *f*, and is secured to the central section by a threaded joint, while at the interior top it is fitted to a double reversible cam, which is connected to the handle.

C represents the packing, which is preferably of rubber. This packing is substantially bell shape in form and is provided at its lower end with an annular flange, *g*. The packing rests upon the upper end of the central section, and its flange *g* is clamped between the ledge or shoulder *f* and said upper edge of the central section, thereby holding the packing firmly and securely in place. The packing has projecting downwardly from its inner upper end an extension, C', which has a passage, *h*, extending through it.

D represents a valve stem. This stem is provided near its lower end with a circumferential depression, *i*, so that when the valve stem is lowered to remove the valve from its seat the passage of liquid through the opening in the lower end of the central section will not be interrupted. The said stem has a rounded upper end, and just below said upper end is formed with an annular flange, *j*, of about the same diameter as the interior of the upper section, but slightly smaller, so as to permit the free vertical movement of the stem.

G represents the ball as it is in the seat closed. For a slight distance below the flange *j* the stem is reduced, thus forming a shoulder, *k*. The said stem has its lower end passed through the passage of the extension of the packing, and said extension fits in the reduced portion of the stem, the lower end of the extension resting on the shoulder of the stem and the upper end of the packing resting against the under face of the flange *j*, said packing, as clearly shown, supporting the stem in a raised position, so that it is normally in the position shown in Fig. 1.

E represents a double reversible cam which



has a central opening, with a square top in opening to receive the rounded upper end of the stem, said cam resting only on the top of the stem, thus avoiding friction on the stem.

5 In operation, when it is desired to open the cock to permit the flow of water, the handle at the upper end of the cock is turned, thus lowering the cam E, which, bearing against the top of the stem D, lowers the stem, thus depressing the packing and removing valve from its seat. When the faucet is to be closed, it is thrown to its seat by the rubber and water-pressure, the handle is turned in the reverse direction, and the packing pressing against the  
15 under face of the flange, raises the stem.

It will be seen from the above description that by the construction described and illustrated a thoroughly effective cock is provided, and one that is simple in its construction and  
20 cheap to manufacture.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a water-cock, the combination of a body

portion having a valve-seat, a spherical valve 25 adapted to engage said seat, a valve-stem adapted to operate the spherical valve, a bell-shaped elastic packing located in the upper part of the body portion and provided upon its lower end with an annular flange and upon 30 its upper end with an extension through which said stem extends, an annular flange upon said valve-stem adapted to rest upon the upper part of said packing, and a cam loosely fitting in the upper part of said body portion, provided 35 with an aperture in its lower part which forms a bearing for the upper end of the valve-stem, said cam being secured to the handle portion, whereby the cam, and hence the valve-stem, can be raised or lowered, substantially as set 40 forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES MILTON ANDERSON.

Witnesses:

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