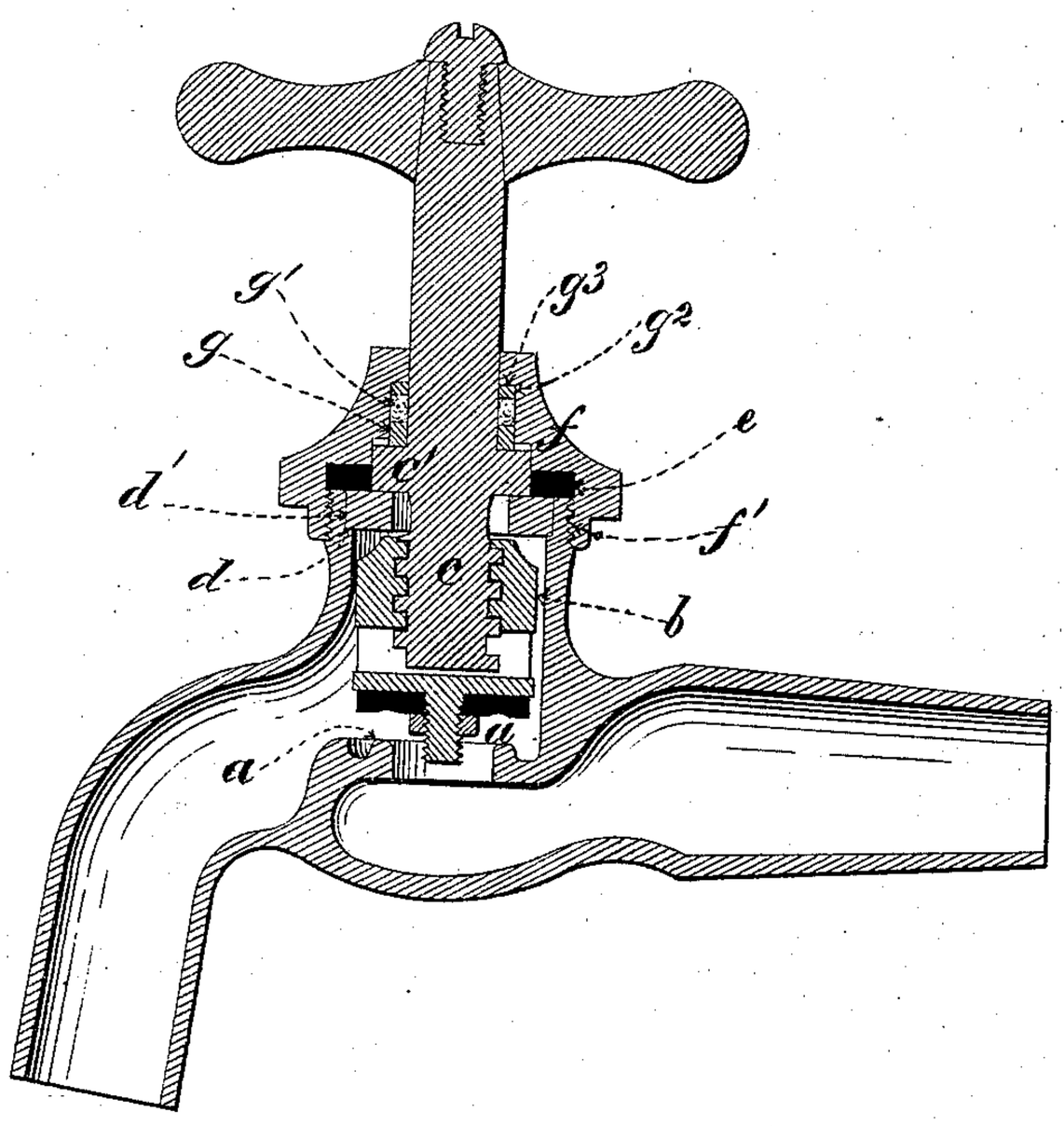
W. DODD.

Compression-Cock.

No. 197,837. Patented Dec. 4, 1877.



Witnesses:

C. M. O'Brien

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UNITED STATES PATENT OFFICE.

WILLIAM DODD, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES HARRISON, OF SAME PLACE.

IMPROVEMENT IN COMPRESSION-COCKS.

Specification forming part of Letters Patent No. **197,837**, dated December 4, 1877; application filed July 18, 1877.

To all whom it may concern:

Be it known that I, WILLIAM DODD, of the city and State of New York, have invented a certain Improvement in Compression-Cocks, of which the following is a specification:

My improvement relates to the mode of packing the valve-stem of a compression-cock; and my invention consists in providing the valve-stem with two loose collars, and in winding upon the valve-stem, between the collars, a suitable quantity of cotton or hempen filaments, to answer the purpose of making a tight joint between the stem and the valve-chamber cap, which, to that end, is provided with a deep recess for containing the collars and the filamentous packing surrounding the valve-stem.

The mode of operation of the parts is such that when the cap is screwed home upon the end of the valve-chamber, the loose collars upon the valve-stem are crowded together, and the filamentous packing is thus compressed and expanded laterally against the valve-stem in one direction, and against the wall of the recess in the opposite direction.

The object of this mode of packing the valve-stem is to obtain a joint which will resist the action of hot as well as cold water.

The accompanying drawing represents a central longitudinal section through the valve-stem and chamber of a compression-cock containing my invention.

The cock is of the usual construction, having an annular valve-seat, *a*. The valve-plug *b* is moved up and down by the screw-thread upon the lower portion of the valve-stem *c*. An annular shoulder, *d*, is formed near the upper end of the inner wall of the valve-chamber, for the support of a metallic washer, *d'*. The valve-stem is provided with a projecting shoulder, *c'*, which rests upon the washer *d'*. Outside the shoulder *c'* is the elastic packing-ring *e*, which packs the joint between the upper end of the valve-chamber and the cap *f*. The upper end of the valve-chamber is provided with a male screw-thread, which engages a female thread, *f'*, upon the interior of the cap *f*. The cap *f* is counterbored, as shown, in the usual way, for the purpose of embracing the top of the valve-chamber, and containing the annular packing-ring *e*. A deep cylindrical recess of smaller diameter is formed in the cap, to admit the upper portion of the shoulder *c'* of the valve-stem, and also the loose metallic collars *g* and g^2, together with the filamentous packing g^1, which is wound upon the valve-stem between the collars *g* and g^2.

The collars *g* and g^2 and the filamentous packing g^1 constitute, in connection with the deep recess in the cap, a stuffing-box, by means of which a water-tight joint is made for the valve-stem.

It will be seen that when the several parts are in position the shoulder *c'* on the valve-stem is supported by the metallic washer *d'*. The lower collar *g* of the stuffing-box rests upon the shoulder *c'*, and the filamentous packing g^1, between the lower collar *g* and the upper collar g^2, is compressed by the pressure of the shoulder g^3 upon the collar g^2 when the cap is screwed down upon the valve-chamber. When thus compressed, the filamentous packing g^1 is expanded radially, in one direction against the valve-stem, and in the other against the annular wall of the recess in the cap. The loose collars *g* and g^2 serve as guides during the process of winding the filamentous packing upon the valve-stem, and afford a convenient means of confining the filaments so wound until the parts of the valve are put together.

I preferably use for a packing material cotton wicking, as this material resists the action of hot water, and affords a water-tight bearing for the valve-stem without causing such friction as would tend to prevent the valve-stem from being easily turned.

I claim as my invention—

In a compression-cock, substantially such as described, a valve-chamber cap, recessed substantially as shown, in combination with the loose collars *g* and g^2 upon the valve-stem, and the filamentous packing g^1, wound upon the valve-stem between the collars *g* and g^2, and adapted to be compressed thereby, to form a water-tight joint between the stem and the cap, when the cap is screwed home upon the end of the valve-chamber, substantially as set forth.

WM. DODD.

Witnesses:

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