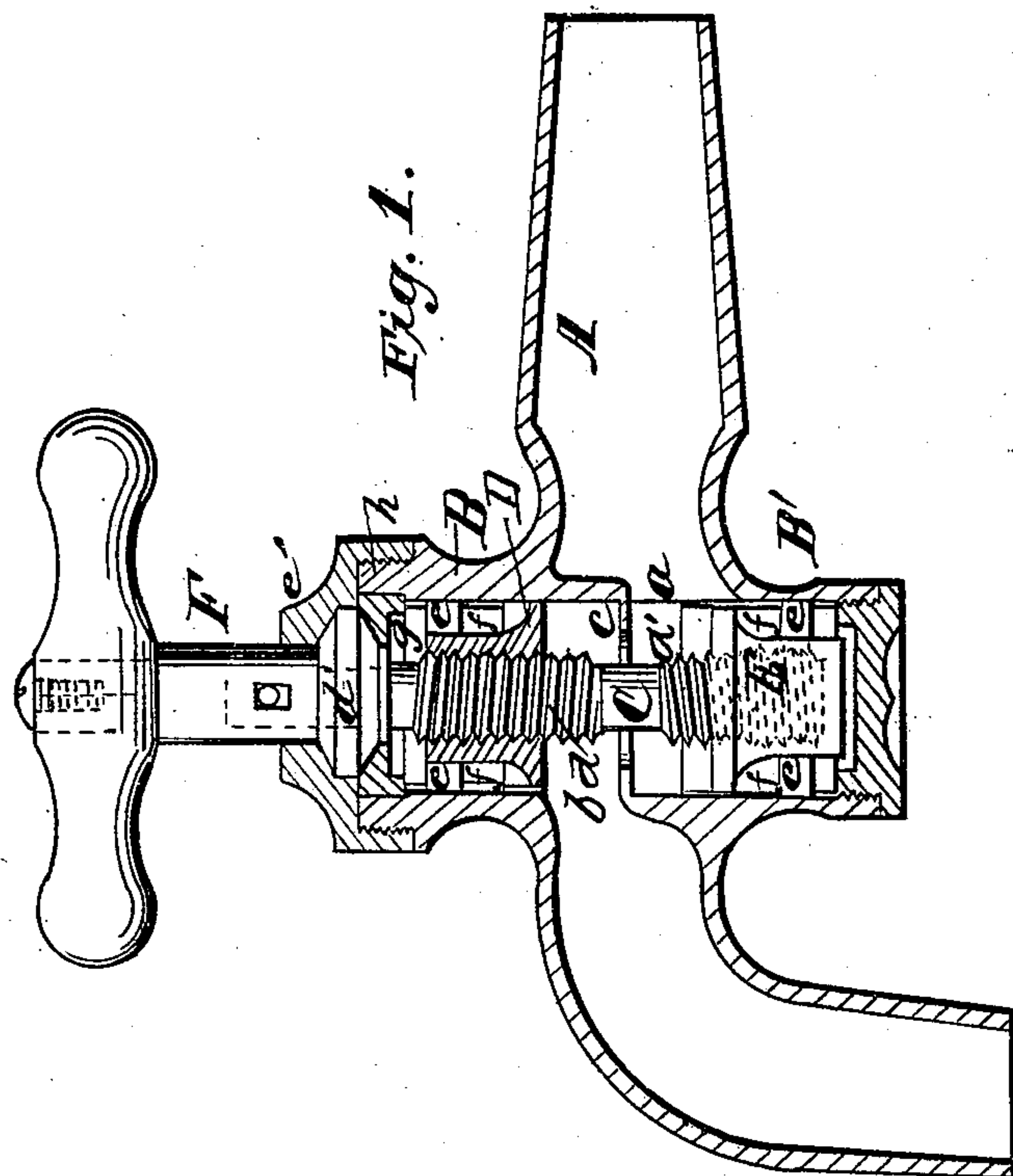


No. 28,596.

PATENTED JUNE 5, 1860.

R. NICOLL.
STEAM AND WATER COCK.



Witnesses:

Witnesses:
Charles Hughes
Wm Thompson

Inventor:

Robert T. Kiell

UNITED STATES PATENT OFFICE.

ROBERT NICOLL, OF NEW YORK, N. Y.

STOP-COCK.

Specification of Letters Patent No. 28,596, dated June 5, 1860.

To all whom it may concern:

Be it known that I, ROBERT NICOLL, of the city, county, and State of New York, have invented a new and Improved Steam and Water Cock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal central section of my invention. Fig. 2 a detached end view of a valve of the same.

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

The object of this invention is to obtain a cock which will have its passage within obstructed in a much less degree than usual by the valve-seat. The seats of ordinary cocks as is well known require to be of a certain degree of thickness in order to bear or sustain the pressure of the valve and this thickness acts as a great obstruction to the passage of the water or steam through the cock. In order to obviate this difficulty I employ two valves placed on a single stem provided with right and left screws, the valves being placed at opposite sides of a seat and made simultaneously to approach and recede from it by the turning of the stem. The two valves pressing on opposite sides of the seat enable me to employ a very thin seat as the same will not be liable to be bent, fractured, or broken, in consequence of the equal pressure at both sides of the seat.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents the body or tube of the cock, and may be of the usual form, and B, B', are two recesses or cylindrical chambers one above the other and one communicating with the inner part of the tube by means of a passage *a*, and the other communicating with the outer part of the tube by a passage *b*.

The chambers B, B', are divided by the valve seat *c*, which is quite thin as shown clearly in Fig. 1, and is in a horizontal position, C, is a valve stem which is fitted vertically in the cock within the chambers B, B'. This stem C, passes through the seat *c*, and

has right and left screws *d*, *d'*, upon it, on which valves D, E, are placed, one on each screw. These valves D, E, are simply nuts provided each with two projections or guides *e*, *e'*, which fit in grooves *f*, in the chambers B, B', and while permitting the valves to rise and fall freely in their respective chambers prevent them from turning therein. The face sides of the valves D, E, are parallel with each other and have plane surfaces and the valves are placed on their screws *d*, *d'*, equidistant from the seat *c*.

The upper end of the stem C, is fitted within an arbor F, which is provided with a collar *d*, and has a cap *e'*, fitted on it, said cap being screwed on the upper chamber B. The upper part of the stem C, is fitted in the arbor F, and secured therein by a key or pin *f'*, a collar *g*, is also placed on the upper part of the stem said collar being fitted in a grooved recess *h*, in the upper end of the chamber B.

From the above description it will be seen that by turning the arbor F, which passes through the cap *e'*, of cylinder B, the valve stem C, will be turned and the valves D, E, moved by the action of the screws simultaneously toward and from the seat *c*. When the valves are brought in contact with the seat the cock of course is closed, and the seat is subjected to an equal pressure at both sides of it.

By this arrangement a very thin seat *c*, may be employed and consequently the passage through the cock is less obstructed than usual as the passages *a*, *b*, will be of greater area owing to the diminished thickness of the valve seat.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is.

The employment or use of two valves D, E, placed at opposite sides of the seat *c*, and made to move simultaneously toward and from the seat by means of the right and left screws, or their equivalents for the purpose specified.

ROBERT NICOLL.

Witnesses:

CHARLES HUGHES,
WM. THOMPSON.