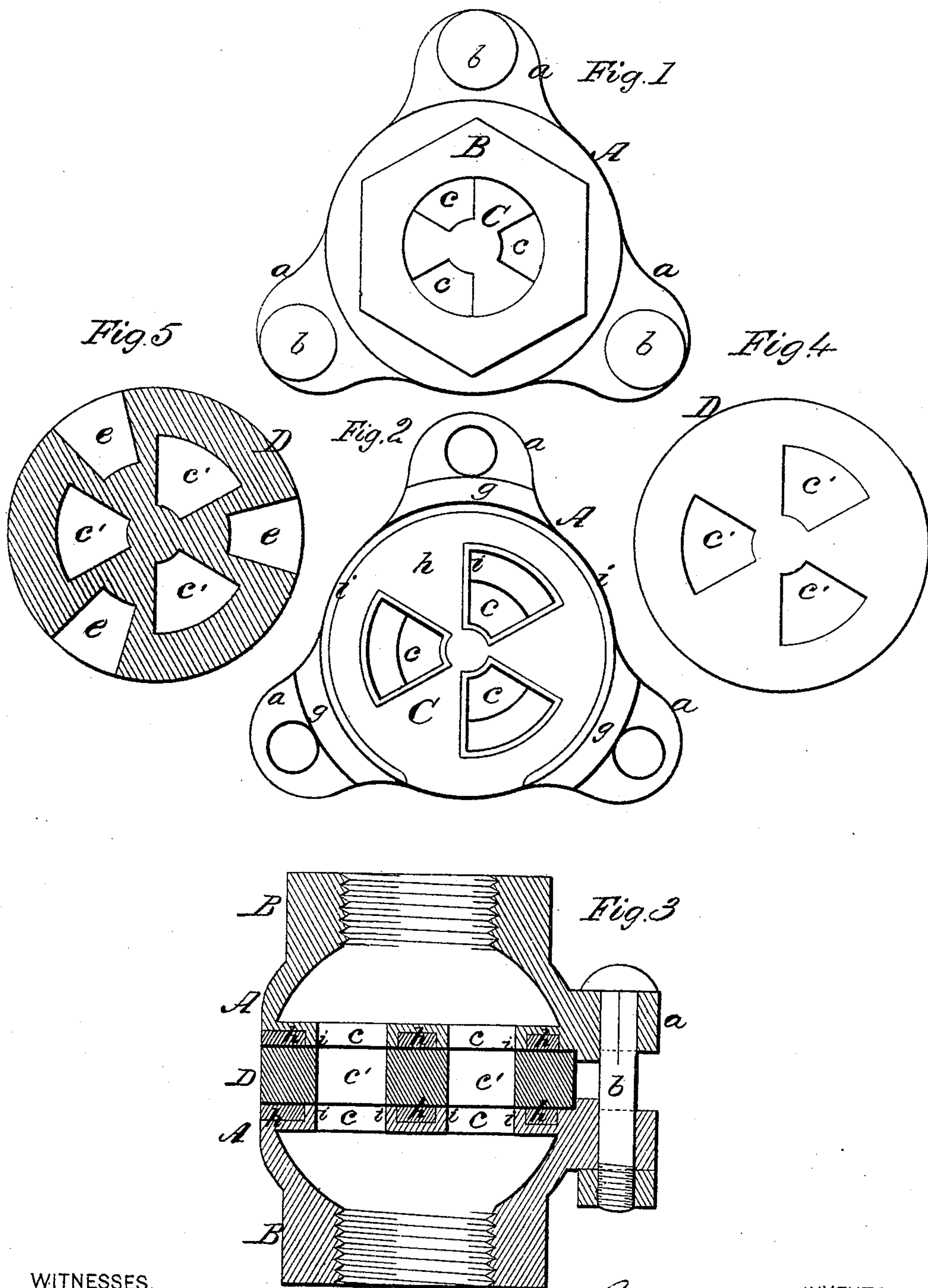


J. C. KILGORE.

Stop-Cocks.

No. 151,401.

Patented May 26, 1874.



WITNESSES,

Villette Anderson.  
George E. Uphaus.

By

John C. Kilgore.  
Chapman, Housley & Co.,

INVENTOR

ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN C. KILGORE, OF SHARPSBURG, PENNSYLVANIA, ASSIGNOR TO THE  
ECLIPSE STEAM MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN STOP-COCKS.

Specification forming part of Letters Patent No. 151,401, dated May 26, 1874; application filed  
April 18, 1874.

*To all whom it may concern:*

Be it known that I, JOHN C. KILGORE, of Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and valuable Improvement in Stop-Cocks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 2 of the drawings are representations of plan views of my stop-cock, and Fig. 3 is a vertical sectional view of the same. Fig. 4 is a detail, and Fig. 5 a horizontal sectional view of the same.

This invention has relation to stop-cocks for steam-pipes, and pipes for conveying water and other fluids; and it consists in a cock which is composed of three sections, secured together, at several points, by bolts and nuts, the intermediate section of the three being made of hard metal, and adjustable about its axis, and properly ported, and the end sections, which are also ported, being constructed with a soft-metal facing, against which the flat faces of the hard-metal section bear, thereby securing a durable and reliable joint, and one which will not rust, as will be hereinafter explained.

In the annexed drawings, A A and D designate the three principal sections or parts composing my improved stop-cock. The two end sections are constructed alike, and each one of these sections is constructed as follows: B designates a prismatic extension of the section A, which is adapted to receive a wrench for screwing it on a pipe, and unscrewing it therefrom. This prismatic portion or nut B of each section A is bored out, and internally screw-threaded, and terminates in a diaphragm, through which three triangular ports, C C C, are formed for the passage of water or steam. The external face of this diaphragm is recessed, so as to form marginal ribs *i*, and into the recess thus formed lead or other soft metal, or an alloy of two or more metals, is suitably applied,

so as to present a soft-metal surface, *h*, inclosed by said ribs *i*, as shown in Figs. 2 and 3. I thus have a surface which is mainly composed of soft metal, inclosed by narrow ribs of hard metal. This section A is also constructed with three perforated lugs, *a a a*, on its periphery, which lugs are arranged equidistant from each other, and which present shoulders *g*, the inner edges of which are concentric to the axis of the sections A A and D, as shown in Fig. 2. The shoulders thus formed on the face of each end section A receive within them the cylindrical section D, which is movable about its axis, and which can be so moved by means of a lever inserted into one or the other of several holes, *e*, made into its periphery, as shown in Fig. 5. This section presents two parallel faces, which are snugly fitted to the faces *h h* of the soft metal applied to the end sections A A; and through this intermediate section ports *c'* are made, which, when they are brought opposite the ports *c* through the diaphragms formed on the end sections, will allow a free flow of steam or water, as the case may be, through the cock. When the ports *c'* are adjusted opposite the imperforated portions of the diaphragms, between the ports *c*, the flow through the cock will be cut off. The three sections A A D, composing the improved stop-cock, are confined together by means of bolts *b*, on which nuts are applied, which are passed through the ears *a*. It is by means of the nuts on these bolts *b* that the two end sections are adjusted up to the faces of the intermediate section D, and the faces kept parallel to each other.

It will be seen, from the above description, that I am able to construct what might be termed a face cock or valve, which is adjustable for wear, and which does not present, between the working faces, a metal that will be liable to corrode; also, that I provide for adjusting the wearing-surfaces evenly together; and, furthermore, that there will be no distortion of the parts consequent upon the setting up of the same to compensate for wear.

It is obvious that the soft metal might be ap-

plied to the movable section, and work just as well.

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

The face-valve composed of two hard-metal, unmovable sections, and one hard-metal, movable section, confined together by adjustable devices, in combination with an interposed

soft-metal filling, *h*, confined by ribs *i*, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

Witnesses: JOHN C. KILGORE.

GEORGE E. UPHAM,

ROBERT EVERETT.