

G. R. MOORE.
Stop-Cocks.

No. 148,969.

Patented March 24, 1874.

Fig. 1.

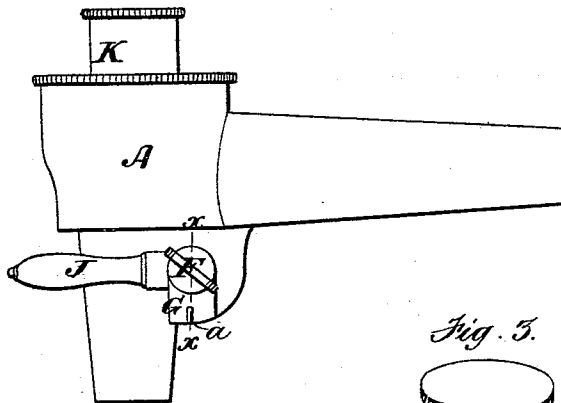


Fig. 3.

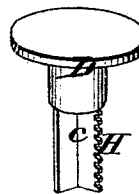


Fig. 2.

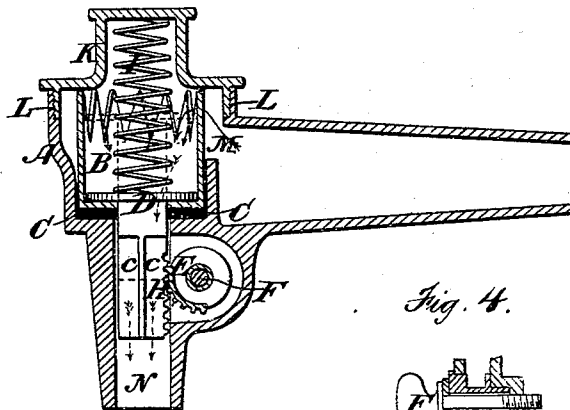
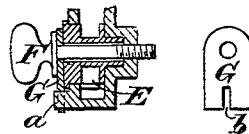


Fig. 4.



Witnesses.

C. F. Brown.

W. H. Ellsworth

Inventor.

Geo. R. Moore

UNITED STATES PATENT OFFICE.

GEORGE RODNEY MOORE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOP-COCKS.

Specification forming part of Letters Patent No. **148,969**, dated March 24, 1874; application filed January 15, 1874.

To all whom it may concern:

Be it known that I, GEO. RODNEY MOORE, of the city and county of Philadelphia and State of Pennsylvania, have invented a Stop-Cock, of which the following is a specification:

The object of my invention is to provide an improved stop-cock consisting of suitable mechanism for securing the following advantages: First, to be self-closing, or not, at the will of the manipulator; second, to have no working joints on the inlet side, or exposed to water-pressure; third, to have the closing stopper or plunger more direct with the water-pressure upon a ground metallic seat, in order to secure the greatest durability; fourth, to have, if desired, an elastic bumper to prevent the jamming of pipes in extreme cases; fifth, to have the opening-lever of such capacity and so arranged that it may be operated with ease; sixth, to have all the parts of such form and relationship to each other that the manufacture of them entire may be conveniently and cheaply accomplished.

Figure 1 is a side view. Fig. 2 is a vertical transverse section. Fig. 3 is a perspective of the plunger, showing its two straight portions, its water-way *c*, and cogs *H*, which, in this case, are all in one piece. Fig. 4 is a vertical transverse section of the parts indicated by the letters upon it, taken crosswise to Figs. 2 and 1, in the line *x x*.

A indicates the external body, upon which the cap *K* is screwed, at *L*. *B* is a socket, fitted so as to guide and seat the plunger *D*. Its upper portion is a water-way from the inlet *M*. It is saw-teeth-shaped, that the descent of the plunger *D* may cut off the inlet of water more gradually than is usual. It is fitted loosely in the casing *A*, and also rests upon an elastic ring, *C*, which is designed to act as a bumper to the momentum of the water when the cock closes. It will also be observed that as soon as *D* is fairly started in closing, (since it fits *B* in both its upper and lower portions nearly water-tight,) a small quantity of water is partially confined in *B*, below the large portion of *D*, before it descends to its proper seat. *E* is a closely-fitting stopper in solid connection with *J*, to which it is a fulcrum. It is hollow, and the thumb-screw *F* passes through it and

holds it as tightly as may be desired in its place in *A*. It has, around a portion of its central part, cogs which match with *H* upon the water-way of the plunger *D*, and thus complete the operating connections with the manual handle *J*. *G* is an intervening plate between *E* and *F*, stayed from turning by a nib, *a*, and slot *b*, so that no friction in working *E* can extend to *F*, so as to make the cock either more or less liable to self-closing; but, if desired to have the cock remain open, *F* may be turned sufficiently to tighten *E* in its seat, so that its own proper friction will hold it from turning, and thus keep the cock open to any desired extent. *I* is a spring.

The operation of this cock is obvious. When the handle *J* is turned up, the cogs upon *E*, playing into *H*, are proportionally moved, and the plunger *D* is carried up to the water-way in *B*, which completes the opening. Then, left to itself, the spring *I* and the force of the water force *D* back upon its seat, thus closing it; or, if *F* be screwed tight enough, it will be kept open by friction, as before explained, until closed by other force.

I do not claim the peculiar shape of the plunger *D*, by which, in combination with its close-fitting sheath, it confines a water-cushion in its passage to its seat. In that particular I have conceded priority of invention to Thomas Shaw, of Philadelphia, Pennsylvania.

I claim as my invention—

1. The combination of the following parts, arranged as above shown: Casing *A*, cap *K*, inlet *M*, water-way and socket *B*, plunger *D*, water-way *c*, cogs *H*, lever *J*, stopper *E*, and spring *I*, substantially as shown.

2. The socket *B*, seated upon the elastic ring *C* in the casing *A*, and operating in combination with the plunger *D*, substantially as shown.

3. The thumb-screw *F*, in combination with the stopper *E* and lever *J*.

4. The plate *G*, with slot *b*, in combination with nib *a*, stopper *E*, and screw *F*, substantially as shown.

GEO. R. MOORE.

Witnesses:

N. K. ELLSWORTH,
MELVILLE CHURCH.