

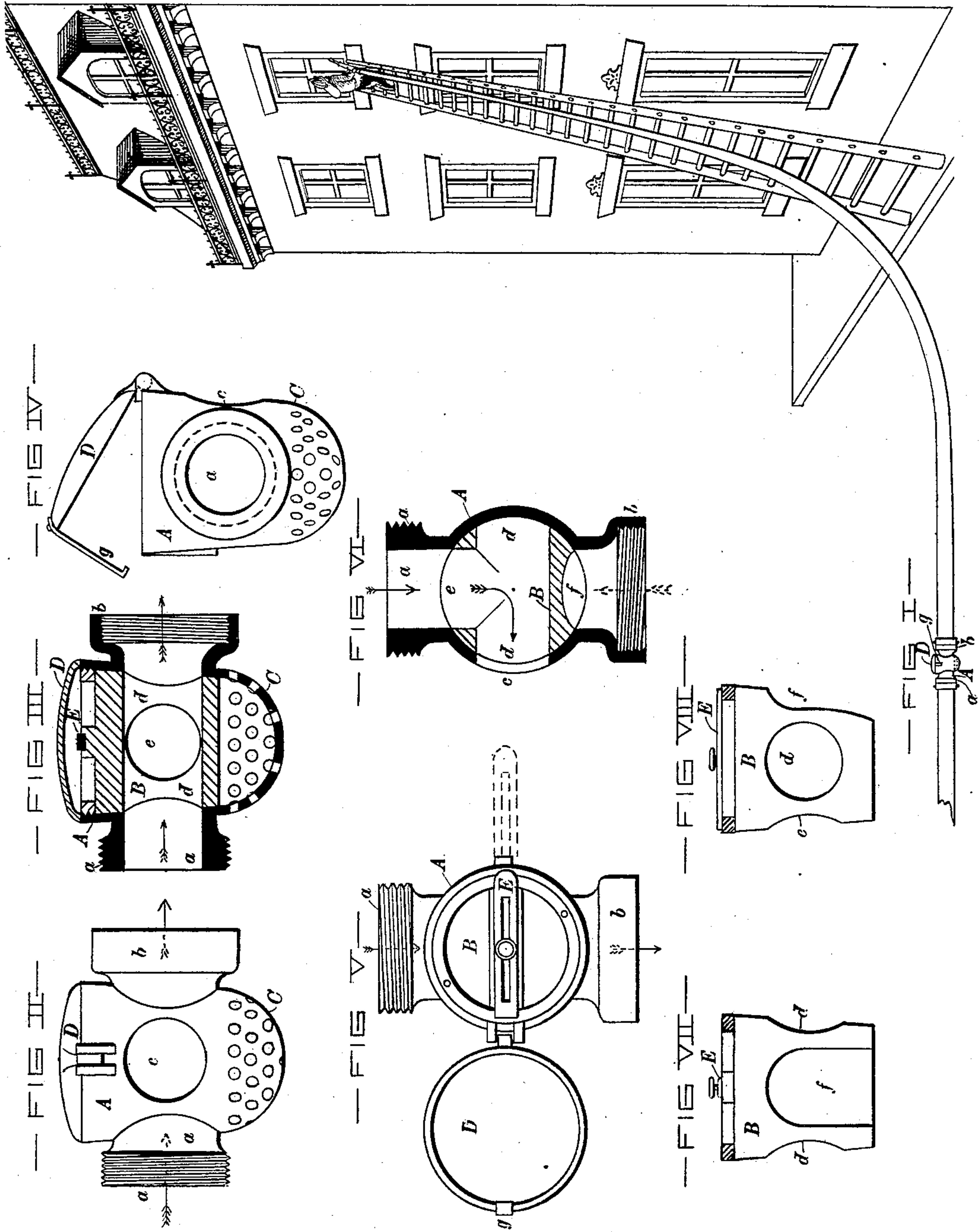
(No Model.)

J. T. HOUCHENS.

RELIEF COCK FOR FIRE ENGINES.

No. 253,479.

Patented Feb. 7, 1882.



— WITNESSES —

*Danl. Fisher*

*J. A. Howard*

— INVENTOR —

*John T. Houchens*

*by G. M. Howard*  
*Att'y.*



# UNITED STATES PATENT OFFICE.

JOHN T. HOUCHENS, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF  
TO ISAAC H. WRIGHT, OF SAME PLACE.

## RELIEF-COCK FOR FIRE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 253,479, dated February 7, 1882.

Application filed October 6, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. HOUCHENS, of the city of Baltimore and State of Maryland, have invented certain Improvements in Relief-Cocks for Fire-Engines, of which the following is a specification.

This invention relates to an improved relief-cock to be placed in a line of hose to shut off the water from the hose-pipe without discontinuing or shutting off the flow of water from the engine, and which will effect the drainage of that part of the hose between the said cock and the hose-nozzle as the same is carried up a ladder to an upper story of a building.

In carrying out my invention I employ a two-way cock the shell of which is provided, at a point underneath the key, with a perforated chamber, and the said key with a groove or depression in one side, which, upon being turned to the part of the shell having the discharge-connection, effects the drainage of water from the hose between itself and the hose-nozzle to the said perforated chamber. The key is also provided with an extension handle or lever, and the shell with a cover or lid to protect the lever in the handling of the hose.

In the further description of my said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure I is a view of the front of a building and a line of hose provided with my improvements, illustrating the manner of using the same. Figs. II, III, IV, V, VI, VII, and VIII are views of the improved relief-cock and parts of the same on an enlarged scale.

Similar letters of reference indicate similar parts in all the views.

A and B are respectively the shell and the key of the cock. The shell has an inlet-nozzle, which is represented by *a*, adapted for attachment to a hose-coupling, and a direct discharge-nozzle, *b*, also fitted for connection to a section of hose. In addition to these openings the shell has a lateral discharge-aperture, *c*, which is shown in the drawings as devoid of any nozzle; but a nozzle may be used, if desired. The key B has an opening, *d*, extending entirely through it, and a branch opening, *e*, extending from the main one at a right angle. The groove or depression in the key be-

fore alluded to is denoted by *f* in Figs. VI, VII, and VIII.

C is the perforated chamber formed at the lower part of the shell, and D the hinged cap which closes over and conceals the upper part of the key and protects the same and the lever in handling the hose. The said cap is provided with a spring-catch, *g*; but any suitable locking device may be used in place of it.

E is the extension handle or lever for moving the key B.

Supposing a line of hose provided with my invention is being used in the extinguishment of a fire in a lower story of a building, and the order is received by the pipeman and the firemen to carry the hose to an upper story, the key B of the cock is turned in such direction as to close the main outlet-orifice and discharge the water through the lateral discharge-aperture *a* in the shell to the street. While the key is in this position the groove or depression is opposite and in communication with the line of hose between the device and the hose-nozzle. Consequently water from this portion of the line of the hose as the same is carried up the ladder is discharged to the perforated chamber, and thence to the street. By this means the hose is more easily handled in view of its decreased weight and increased flexibility, as will be readily understood.

When the key B of the cock is in the position illustrated in Fig. III the water from the engine passes through it, as indicated by the arrows in full lines, to the hose-nozzle, and the groove or depression is opposite a plain portion of the shell A, and inoperative; but when the key is turned to the position indicated in Fig. VI the water from the engine escapes through the branch opening *e* in the key and the lateral discharge-aperture *c* in the shell to the street. The parts of the device occupying the relative positions described, the water from the section of hose leading to the hose-pipe flows back through the groove or depression *f* to the perforated chamber C, and thence to the street. The direction of the returned water is indicated by arrows in dotted lines, Fig. VI.

I claim as my invention—

1. In combination with the shell A, having the nozzles *a* and *b* and the lateral discharge-aperture *c*, the key B, provided with the open-

ing *d*, branch opening *e*, and the groove or depression *f*, substantially as specified.

2. In combination with the shell A and key B, the latter having means whereby it may be  
5 turned in the shell, the cap D, hinged to the shell and fitted with a locking device, substantially as specified.

3. The shell A, having suitable nozzles and a perforated chamber at a point below the lower  
10 end of the key B, combined with the said key, the same having a groove or depression whereby one of the nozzle-openings may be placed

in communication with the said perforated chamber, substantially as specified.

4. The key B of the cock, having an extension handle or lever which may be closed so as  
15 not to extend beyond the periphery of the said key, combined with the shell A and hinged cap D, substantially as specified.

JOHN T. HOUCHENS.

Witnesses:

THOS. W. MORSE,  
JOHN D. HOWARD.