C. H. SCOFIELD.
Automatic Gas-Cocks.

No. 195,905. Patented Oct. 9, 1877.

Fig. 4.

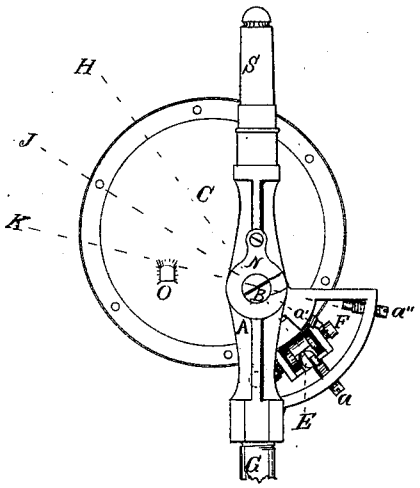

Fig. 1.

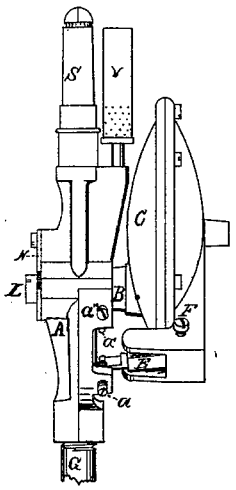

Fig. 2.

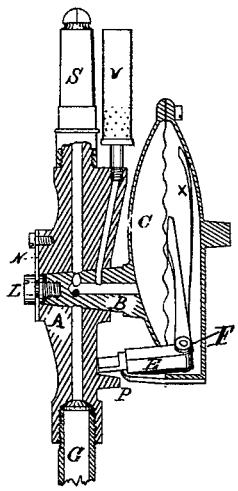

Fig. 3.

Witnesses
A. J. Simmons
C. G. Brown

Inventor
Charles Henry Scofield.

UNITED STATES PATENT OFFICE.

CHARLES H. SCOFIELD, OF UTICA, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO WINSLOW P. FISH, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC GAS-COCKS.

Specification forming part of Letters Patent No. **195,905**, dated October 9, 1877; application filed September 3, 1877.

To all whom it may concern:

Be it known that I, CHARLES H. SCOFIELD, of Utica, Oneida county, New York, have invented certain Improvements in Automatic Cocks, of which the following is a specification:

The object of this invention is to enable an operator to control the discharge of gas, air, water, or other liquids, to change its direction, or to stop it entirely, in any number of cocks simultaneously, by simply changing the pressure of the gas or liquid being discharged; and it will be readily understood by reference to the accompanying drawings, which represent it as applied to a gas-burner.

Figures 1 and 2 are front and side elevations; Fig. 3, a vertical section through the center; and Fig. 4 shows the adjusting-screw and latch.

The cock is composed of the body A and plug B, containing such passages as desired, and fitted to the body or seat in the usual manner, and the case C eccentrically attached to and forming part of the plug. The case C contains a diaphragm, D, of corrugated metal, as shown, or of rubber, leather, or other suitable material. A bell-crank, E, is attached to the case by means of the pivot-screws F, one arm of which crank rests on the back of the diaphragm, and the other projects from the case, and comes in contact with the adjustable check-studs *a*, *a'*, or *a''*, which are arranged alternately within and without the circle described by the bell-crank as it rotates with the plug and case, and checks their rotation, as desired.

The interior of the case is at all times in communication with the service-pipe G, by the passages in the body and plug.

It will be seen that if the pressure on the diaphragm be increased, the outer end of the bell-crank will be thrown toward the plug or center. This will release it from the stud *a*, when the weight of the case will cause it to rotate until the bell-crank strikes the inner stud *a'*, or from the line H to the line J. If the pressure be now reduced, the spring X throws the end of the bell-crank outward, and releases it from the stud *a'*, when it rotates until it strikes the stud *a''*, or from the line J to line K. If the pressure be again increased, the bell-crank is released from the stud *a''*, and the case and plug rotate until the stop *o* strikes the stud P, Fig. 3, which finally arrests it. At each of these several stops a passage may be opened or closed to any desired connection.

The plug B is secured in its seat by the adjusting-screw L and the latch N, Fig. 4. The plug is adjusted to its seat by the screw, and the latch, closing into the channel in the head, prevents its becoming jammed or too free in the seat, while it may be readily removed and replaced without disturbing the adjustment.

If the plug be placed concentric with the case, it may be rotated by means of a spring or weight, and the series of check-studs continued entirely around the circle, thus greatly increasing the number of changes which can be made.

As shown in the drawings, connection may be made with the main and auxiliary burners S and V alternately, or with both together, or with neither.

A check-stud and bell-crank were used to check the rotation of the plug and case in the cock for which Letters Patent were granted me on the 24th of July, 1877, and I do not now claim them; but

I do claim—

1. The series of adjustable studs *a a' a''*, arranged in the path of the bell-crank, and from which it is released by changes in the pressure, as described.

2. The adjusting-screw L and latch N, as constructed and applied to the plug B, for the purpose specified.

CHARLES HENRY SCOFIELD.

Witnesses:
A. I. SIMMONS,
E. G. BROWN.