

(No Model.)

C. F. BINGHAM.
STOP COCK BOX.

No. 406,253.

Patented July 2, 1889.

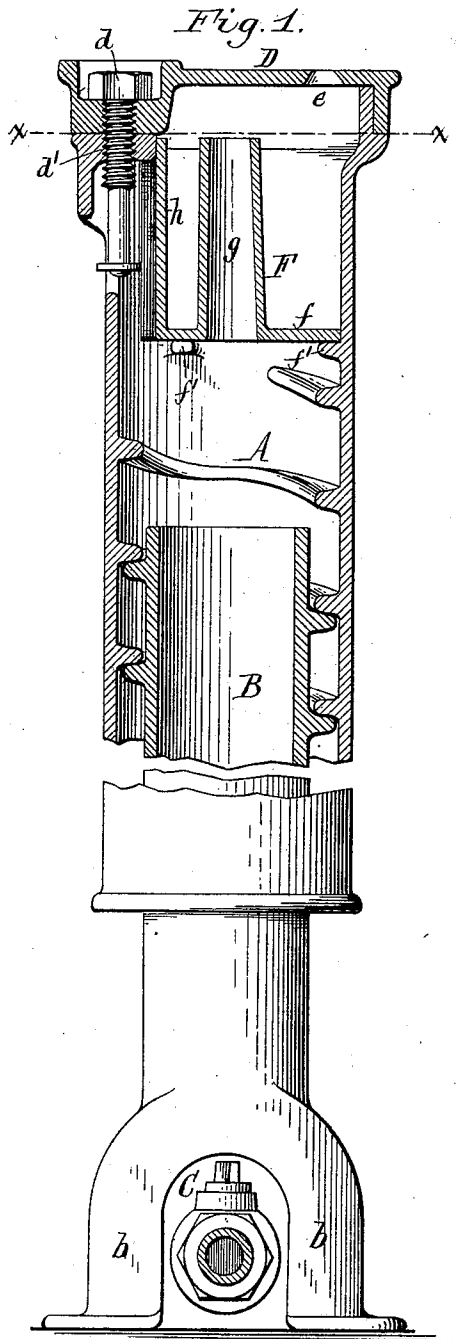
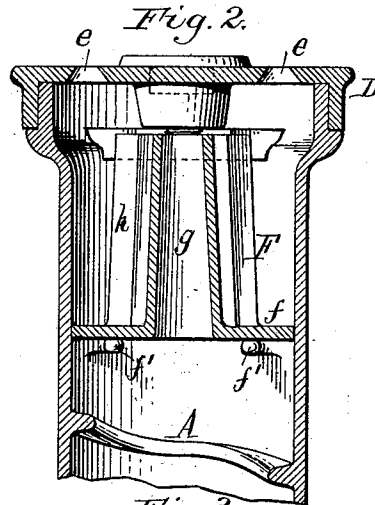


Fig. 3.

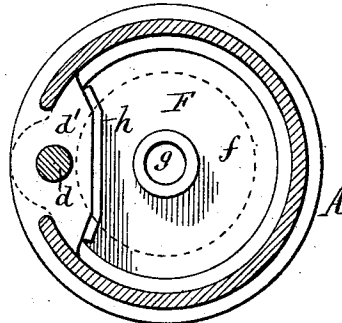
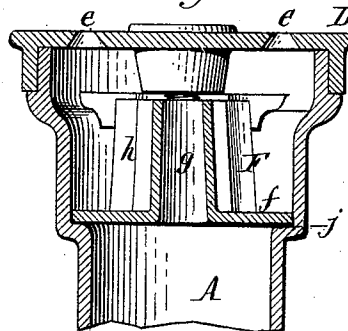


Fig. 4.



Witnesses:

Thos. L. Popp.
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UNITED STATES PATENT OFFICE.

CHARLES F. BINGHAM, OF BUFFALO, NEW YORK.

STOP-COCK BOX.

SPECIFICATION forming part of Letters Patent No. 406,253, dated July 2, 1889.

Application filed March 20, 1888. Serial No. 267,854. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BINGHAM, of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Stop-Cock Boxes, of which the following is a specification.

This invention relates to an improvement in the boxes or casings which are employed for inclosing the cocks of water and gas pipes arranged below the surface of the ground, and more particularly to boxes of this kind which are used in connection with pipes through which natural gas is supplied. The stop-cocks of these pipes sometimes become leaky, in which case the gas escapes into the stop-cock box, and if it finds no vent in the box it passes along the outer side of the gas-pipe into the dwelling in which the pipe terminates, and sometimes causes disastrous explosions. To prevent this, the cover of the stop-cock box has been provided with openings, through which the gas is allowed to escape from the box in the event of leakage. This construction is objectionable, however, because dirt, &c., work through these gas-escape openings into the box, thereby covering the stop-cock and obstructing access thereto.

The object of my invention is to provide the stop-cock box with a trap, whereby the dirt falling through these gas-escape openings will be prevented from dropping into the bottom of the box and burying the stop-cock; and the invention consists of the improvement, which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of a stop-cock box provided with my improvement. Fig. 2 is a similar view of the upper portion of the box, taken at right angles to Fig. 1. Fig. 3 is a horizontal section in line *xx*, Fig. 1. Fig. 4 is a sectional elevation showing my improvement applied to a modified form of box.

Like letters of reference refer to like parts in the several figures.

My improvement is shown as applied to a box composed of two telescopic parts or sections having screw-threads, so that the box can be lengthened or shortened.

A represents the upper part of the box. B is the lower part, having legs *b*, which straddle

the gas-pipe, and C is the stop-cock, arranged in the lower portion of the box.

D represents the cover, closing the upper end of the box and attached thereto by a screw-bolt *d*, arranged in a threaded lug *d'*, formed on the inner side of the upper part A of the box, at the upper end thereof. The cover D is provided with a number of openings *e*, through which any gas leaking into the stop-cock box can escape from the latter. These openings are preferably made flaring downwards, so as to prevent dirt from lodging in the openings and clogging the same.

F represents the dirt trap or receptacle, arranged within the stop-cock box above the stop-cock, preferably immediately below the cover D, and which receives any dirt, &c., entering through the openings *e* and prevents the same from falling into the bottom of the box upon the stop-cock. This dirt-trap consists of a horizontal plate or diaphragm *f*, which is supported upon lugs *f'*, formed on the inner side of the stop-cock box, and an upright tube *g*, arranged upon the diaphragm *f*, through which the gas passes from the portion of the box below said diaphragm to the upper portion of the box containing the escape-openings *e*. The tube *g* rises to a sufficient height above the diaphragm F to prevent the dirt which accumulates upon the diaphragm from overflowing into the tube and falling into the bottom of the box. The portion of the diaphragm F adjacent to the bolt *d* is cut away, so as to clear the lug *d'* and the bolt in inserting the diaphragm into the box, and the diaphragm is provided at this point with an upwardly-projecting plate *h*, which bears at its upper end against the lug *d'* and forms a wall, whereby the portion of the box above the diaphragm is separated from the space below the lug *d'*. The lateral edges of the upright plate *h* extend to the inner surface of the box, as clearly shown in Fig. 3, so as to prevent the dirt from escaping at these points. If preferred, the upper portion of the box may be enlarged to form an annular shoulder *j*, upon which the diaphragm F rests, as represented in Fig. 4.

Any gas leaking into the lower portion of the stop-cock box passes through the tube *g* and escapes through the apertures *e* in the

cover. The dirt accumulating on the diaphragm F is removed from time to time by withdrawing the diaphragm from the box by means of the tube *g*. When it is desired to
5 insert a key into the box for turning the plug of the stop-cock, the diaphragm is removed.

I claim as my invention—

1. The combination, with a stop-cock box provided with a removable cover having gas-
10 escape openings *e*, of a removable dirt-trap F, arranged within the box and composed of a bottom plate or diaphragm *f*, fitting the inside of the box, and an upwardly-projecting tube *g*,
15 having its lower end opening into the box below the plate *f* and its upper end terminating below the removable cover, whereby any gas contained in the box below the trap F is per-

mitted to escape through the tube *g* and openings *e*, substantially as set forth.

2. The combination, with the stop-cock box 20 provided on its inner side with a lug *d'*, of the cover D, provided with gas-escape openings *e* and attached to the stop-cock box by a screw-bolt arranged in said lug, the removable diaphragm F, supported within the box and pro- 25 vided with an upright plate *h*, bearing against the lug *d'*, and an upright gas-escape tube *g*, substantially as set forth.

Witness my hand this 14th day of March, 1888.

CHARLES F. BINGHAM.

Witnesses:

FRED. C. GEYER,
CHESTER D. HOWE.