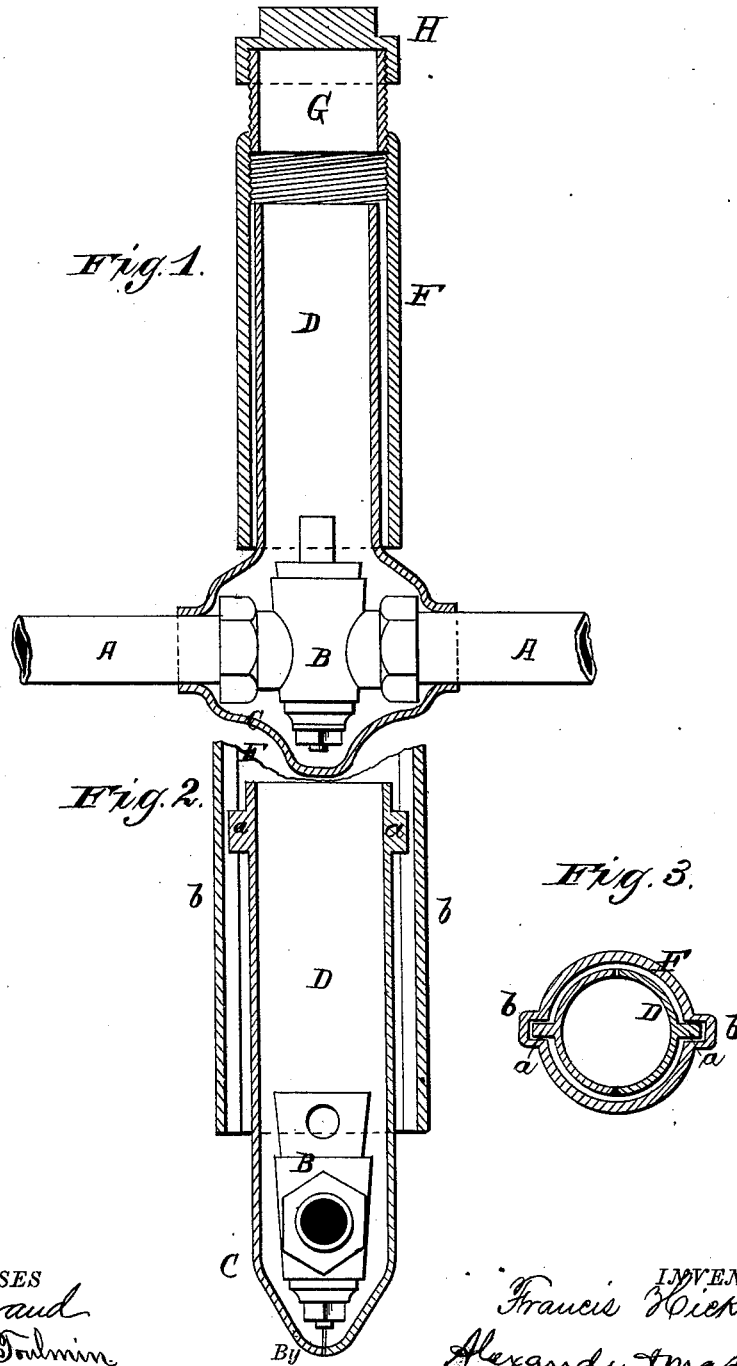


F. HICKMAN.
 Box and Protector for Underground Stop-Cocks.
 No. 213,419 Patented Mar. 18, 1879.



WITNESSES
F. L. Coraugh
H. Aubrey Tolmin

INVENTOR
Francis Hickman
Alexander Mason

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS HICKMAN, OF READING, PENNSYLVANIA.

IMPROVEMENT IN BOXES AND PROTECTORS FOR UNDERGROUND STOP-COCKS.

Specification forming part of Letters Patent No. **213,419**, dated March 18, 1879; application filed February 4, 1879.

To all whom it may concern:

Be it known that I, FRANCIS HICKMAN, of Reading, in the county of Berks, and in the State of Pennsylvania, have invented certain new and useful Improvements in Boxes and Protectors for Underground Stop-Cocks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to underground stop-cocks; and it consists in the construction of a box for completely inclosing the same to protect it from dirt and grit, and also in the combination of parts, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a central vertical section of my invention. Fig. 2 is a vertical section of a part thereof, taken at right angles to the section shown in Fig. 1. Fig. 3 is a detailed horizontal section.

A A represent two pipes, connected by a stop-cock, B, constructed in any of the known and usual ways.

The stop-cock B is entirely inclosed within a jacket or chamber, C, having a tubular upward extension, D.

The chamber C extends around the adjacent ends of the pipes A A, and around the bottom and sides of the cock. The chamber C and its tube D are cast in two vertical sections, so as to be easily placed around the cock

B and pipes A A. Upon each section of the tube D is formed an exterior central flange or lug, *a*, near the top, as shown in Figs. 2 and 3.

Over the tube D is placed a sleeve, F, having on opposite sides flanges *b b*, which are grooved longitudinally on the inside and fit over the lugs *a a*. This sleeve F holds the two sections of the chamber and tube together in place.

In the upper end of the sleeve F is screwed the stand-pipe G, reaching up to the surface of the ground, and provided at the top with the cap H.

The chamber C incloses the whole cock, and prevents sand and grit from entering the working parts, and, being made in two sections, admits of it being applied to pipes and stop-cocks already in the ground, as well as to new work.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An underground stop-cock box with projecting tube, cast in two sections, held together by an exterior sleeve, for the purposes herein set forth.

2. The combination of the box C and tube D, cast in two sections, and provided with exterior lugs, *a*, near the top, and the exterior sleeve, F, provided with grooved flanges *b*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of January, 1879.

FRANCIS HICKMAN.

Witnesses:

JAMES R. KENNEY,
JOHN H. JACOBS.