No. 648,128. Patented Apr. 24, 1900.

D. Y. KINNIBURGH.

SYSTEM FOR LAYING SUPPLY PIPES.

(Application filed June 14, 1899.)

(No Model.)

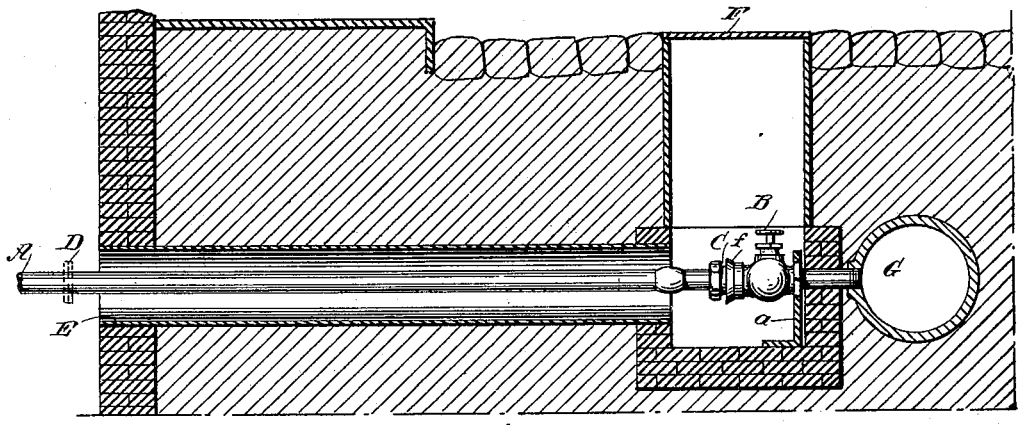

Fig. 1

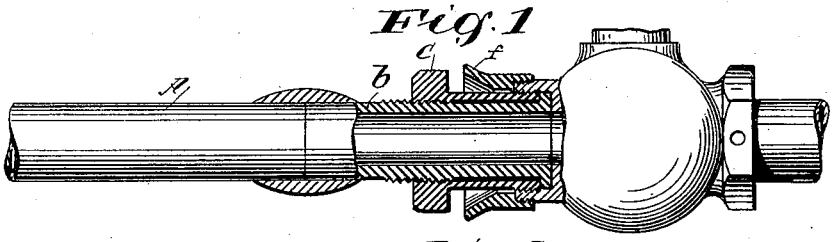

Fig. 2

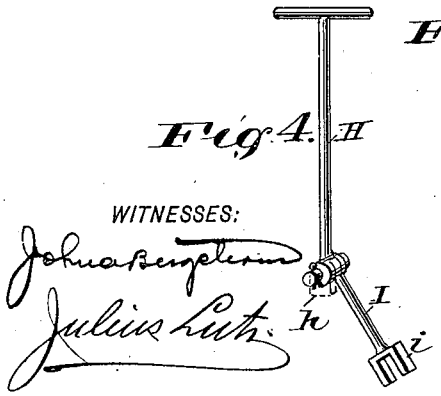

Fig. 4.

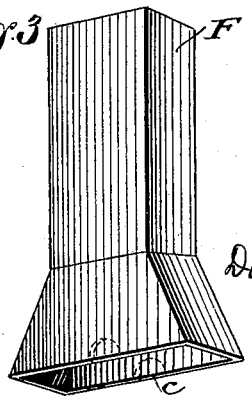

Fig. 3

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SYSTEM FOR LAYING SUPPLY-PIPES.

SPECIFICATION forming part of Letters Patent No. 648,128, dated April 24, 1900.

Application filed June 14, 1899. Serial No. 720,586. (No model.)

To all whom it may concern:

Be it known that I, DAVID YOUNG KINNIBURGH, a subject of the Queen of Great Britain, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Laying Supply-Pipes, of which the following is a specification.

My invention relates to supply-pipes underground and under the streets from the mains to the interior of the building and is to have the supply-pipes accessible without excavating or opening the roadway. By inclosing the supply-pipe under the street in an outer pipe, placing a valve or stop-cock on the supply-pipe near the main, a joint, coupling, or coupling-section on the supply-pipe adjoining said valve or stop-cock under an opening in the street, giving access to said joint and stop-cock on the supply-pipe, the supply-pipe under the street can be disconnected from the main and withdrawn from under the street through the inclosing pipe into the building, and from inside the building the same or a new supply-pipe can be replaced in position under the street and reconnected with the main without shutting off the main or opening the roadway.

The stop-cock is not an essential part of the combination; but its omission necessitates shutting off the main.

Figure 1 is a side elevation of a lead water-supply pipe. Fig. 2 is a sectional view of the coupling in Fig. 1. Fig. 3 is a perspective view of the cover set over the coupling and stop-cock, giving access from the street to the stop-cock and coupling on the supply-pipe. It is set against the main on brick, the brickwork being hollow and forming a continuation of the cover, giving additional room for working the coupling. It can be made with an opening *c* for the entrance of the supply-pipe, and when said entrance is used for the supply-pipe the end of the inclosing pipe can be joined to the left opening and the rear flange of the stop-cock to the right opening, the height of shaft of the cover being varied to bring its opening level with the street. If cover without opening *c* is used, the supply-pipe is carried through the brickwork under the cover, the inclosing pipe resting in the left wall, and the brickwork is adjusted in height to bear the cover level with the street and suit the depth of the main. Fig. 4 is a perspective view of a hinged wrench in two sections, the first section H having a two-pronged fork or tool *h* to open and shut the stop-cock and the second section I a wrench *i* to work a coupling, said wrench having a circular hole in its handle end fitting into the fork of the section H, with similar connecting-holes on each prong, allowing of different shapes and sizes of wrench, the two sections being joined together by an axle secured by a pin and when so joined forming a hinged wrench to work the coupling inside the cover, Fig. 3.

Fig. 1 is a side elevation of a lead water-supply pipe A, inclosed in an outer pipe E, extending from inside the building-wall to the cover, Fig. 4, set over the coupling C and stop-cock B on the supply-pipe, said cover giving access from the street at F to the stop-cock and coupling. *a* is a strut or brace attached to the flange of the stop-cock, rendering the stop-cock and connecting supply-pipe to the main rigid. *f* is a funnel rigidly attached to or forming part of the stop-cock, having a short section inside smooth to hold the joint in position and secure a true alinement of the joint and a short section threaded to receive the coupling. G is a main.

Fig. 2 is a drawing of the coupling, in which *b* is a short brass section soldered to the end of the supply-pipe, over which, on a thread, turns the coupling C, threaded on its outside to connect inside the funnel *f*.

To take the supply-pipe from under the street, shut off the stop-cock and uncouple the coupling C, using the hinged wrench, Fig. 4, and from inside the building withdraw the supply-pipe through the inclosing pipe into the building. Reverse this operation to replace and reconnect the supply-pipe with the stop-cock. The coupling shown is easily worked from the street and easy to make and keep tight.

Other joints or couplings can be used. If a flange-joint be placed on the supply-pipe at D, as shown in dotted outline, a common screw-joint can be used at C by turning the whole length of the supply-pipe within the inclosing pipe. If the flange-joint D is placed as shown and the interior connecting supply-pipe be lead, the supply-pipe under the street can be

iron. The flange joint or coupling D can be placed at any convenient point on the supply-pipe accessible from the building.

An intermediate joint or coupling, with or without access thereto, can be placed on a long length of supply-pipe. The stop-cock and connection to the main can be made rigid by flange-joints or by keying or locking the joints, and the brace can be attached to other parts of the stop-cock; but the stop-cock or coupling and connection to the main should be made rigid.

The inclosing pipe can be of any suitable material. Baked vitrified-clay drain-pipe or properly-prepared wood is cheap and efficient.

Having described my invention, I do not confine myself to any particular form of valve or stop-cock, joint or coupling, or inclosing pipe.

What I claim as new and useful is—

1. The combination of an outer pipe inclosing a supply-pipe under the street, a coupling on said supply-pipe under an opening in the street giving access to said coupling, substantially as and for the purpose described.

2. The combination of an outer pipe inclosing a supply-pipe under the street, a stop-cock and coupling on said supply-pipe under an opening in the street giving access to said stop-cock and coupling, substantially as and for the purpose described.

3. The combination of an outer pipe inclosing a supply-pipe under the street, a joint or coupling on said supply-pipe under an opening in the street giving access to said joint or coupling, and a joint or coupling on the supply-pipe accessible from the building, substantially as and for the purpose described.

4. The combination of an outer pipe inclosing a supply-pipe under the street, a stop-cock and joint or coupling on said supply-pipe under an opening in the street giving access to said stop-cock and joint or coupling, and a joint or coupling on the supply-pipe accessible from the building, substantially as and for the purpose described.

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Witnesses:

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