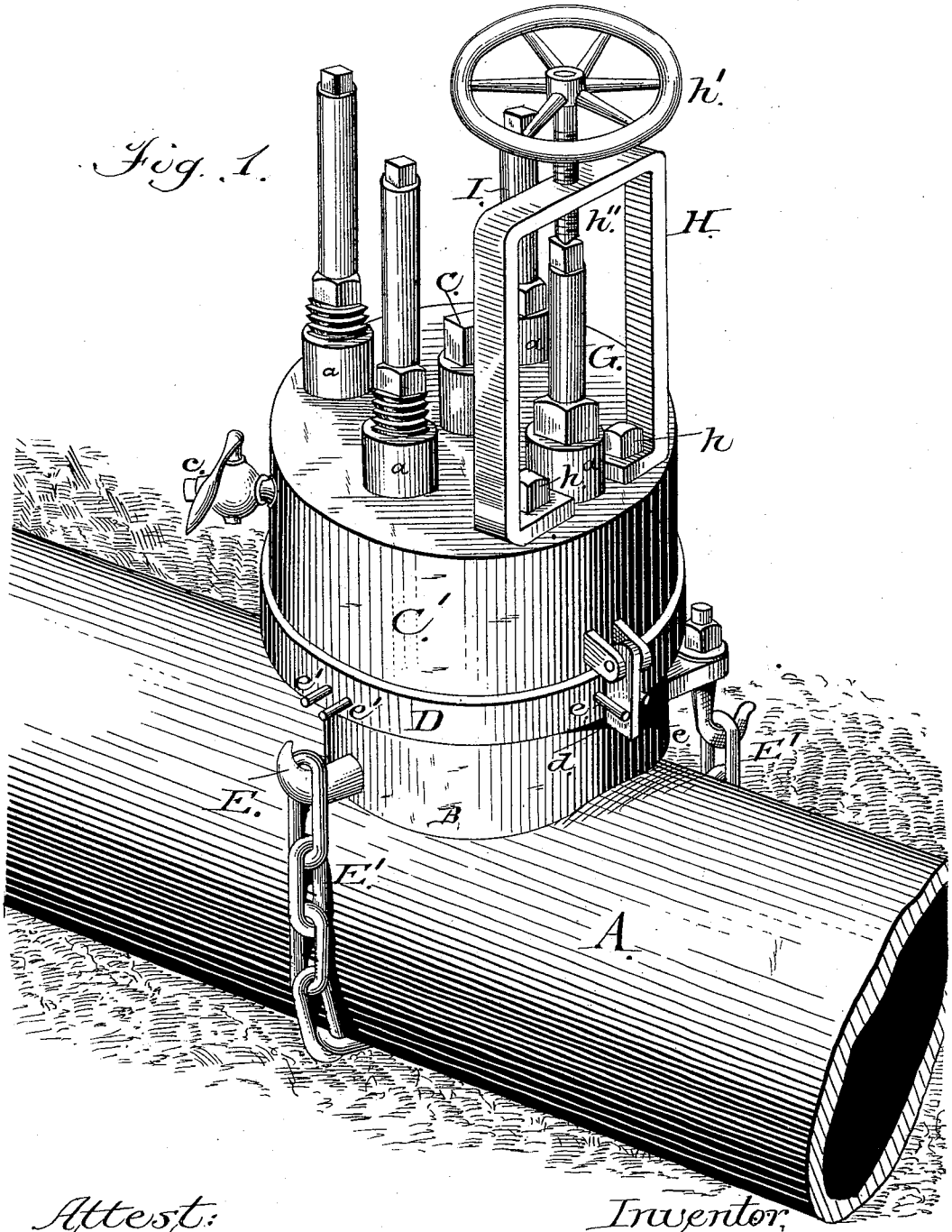
(No Model.) 3 Sheets—Sheet 1.

D. LENNOX.

DEVICE FOR TAPPING GAS AND WATER MAINS.

No. 284,746. Patented Sept. 11, 1883.

Fig. 1.



Attest:
T. Walter Fowler
H. B. Applewhaite

Inventor:
David Lennox
Per attys. A. H. Evans & Co.

N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

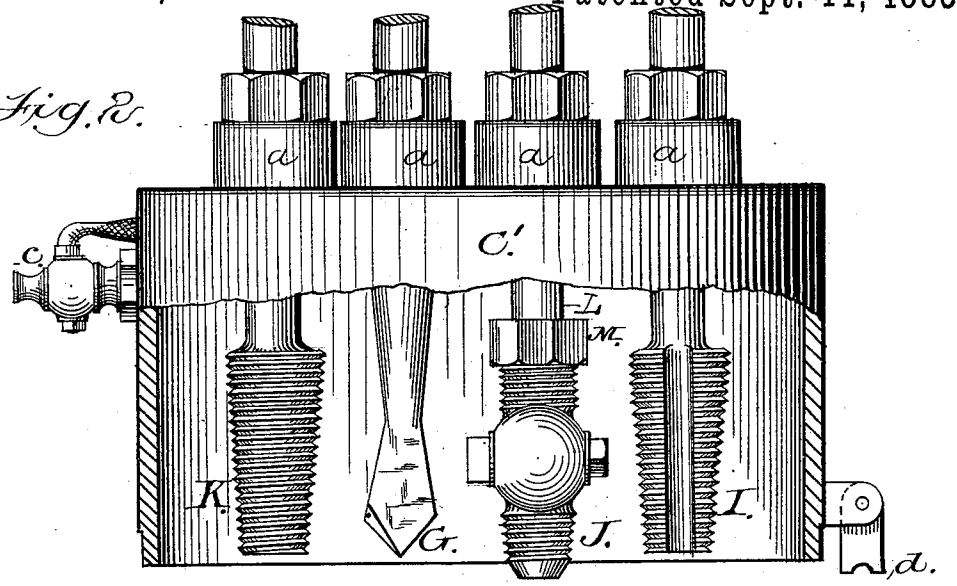
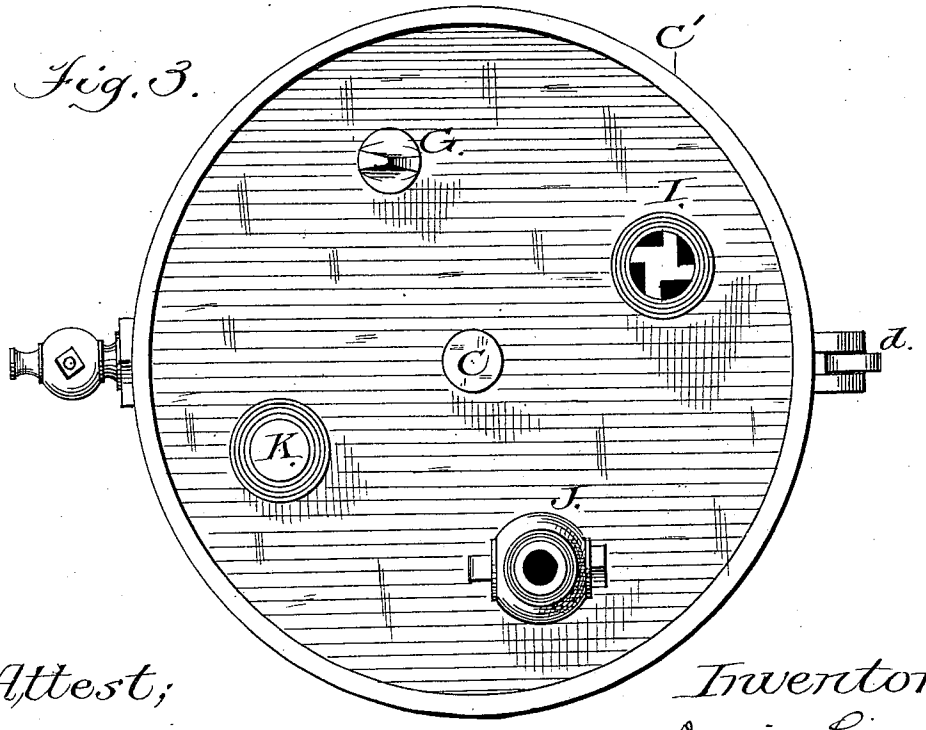


Fig. 3.



Attest;

Walter Fowler.

H. B. Applewhaite.

Inventor;

Davis Lennox

per attys.

A. H. Evans & Co.

N. PETERS. Photo-Lithographer. Washington, D. C.

(No Model.) 3 Sheets—Sheet 3.

D. LENNOX.

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Fig. 4.

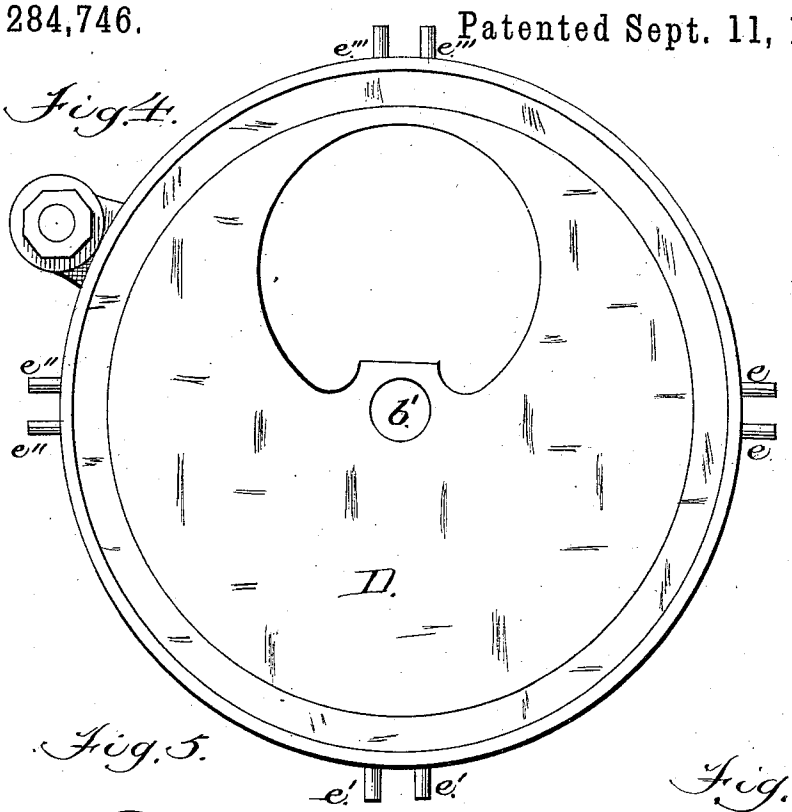


Fig. 5.

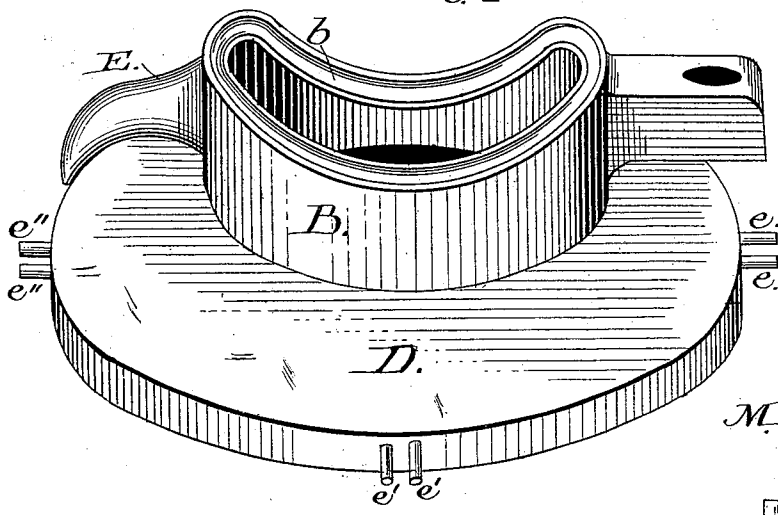
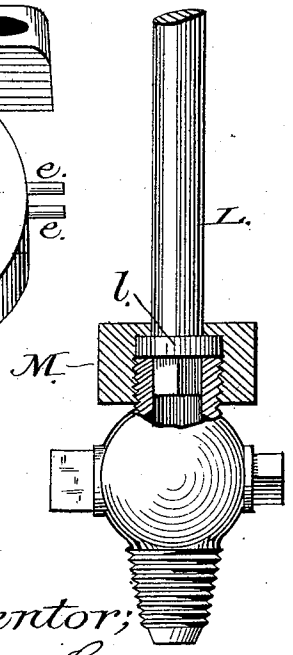


Fig. 6.



Attest;
S. Wallis Fowler.
H. B. Applewhaite.

Inventor;
David Lennox
per atty.
A. H. Evans & Co.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

DAVID LENNOX, OF MARSHALLTOWN, ASSIGNOR OF ONE-HALF TO CHARLES E. TIBBLES, OF BURLINGTON, IOWA.

DEVICE FOR TAPPING GAS AND WATER MAINS.

SPECIFICATION forming part of Letters Patent No. 284,746, dated September 11, 1883.

Application filed March 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID LENNOX, of Marshalltown, in the county of Marshall, State of Iowa, have invented certain new and useful Improvements in Devices for Tapping Water and other Mains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a device for tapping mains with my improvements attached. Fig. 2 is an enlarged view of the cap with a portion of the rim broken away. Fig. 3 is a view looking into the cap, the bottom being removed. Fig. 4 is a plan view of the bottom with the cap removed. Fig. 5 is a perspective view of the under side of the saddle. Fig. 6 is a detail to be referred to.

The object of my invention is the tapping of water and other mains and the introduction or renewal of faucets without having first to shut off the water to prevent waste; and it consists of the several combinations of devices hereinafter described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, A represents a section of a water-main on which is secured the apparatus for tapping the same. The hollow saddle B, having its lower edge shaped to conform to the convex surface of the main, is provided with the groove *b* around the face of its lower edge, into which may be placed the necessary packing to cause the saddle to fit different mains varying slightly in size. The saddle is provided with a female screw, *b'*, to receive the screw-bolt C, which passes down through the cap C', and by which the cap is securely held upon its bottom plate, D, made integral with the saddle. The whole device is held to the main by means of the hook E and chain E', or by any other well-known means. In securing the device to the main the saddle is to be placed immediately over the spot to be tapped, and cap secured in position on the saddle by means of the screw-bolt C.

The cap C' is of peculiar construction, and is provided with all the tools requisite for tapping the main, these tools operating through closely-fitting packed bearings *a a*, arranged concentrically around said cap and near its periphery.

The operation of my device is as follows: The cap, provided with the necessary tools, being secured in position on its seat or bottom plate, D, by means of the screw-bolt C, the drill G is brought into position over the spot on the main to be tapped, and then the pivoted latch *d* on the cap C' is dropped between the lugs *e e* on the periphery of the plate D. This latch prevents the cap turning on its seat while the drill is being operated. The yoke H is then placed in position over the drill, and its bifurcated ends hooked under the heads of the pins *h h*. Then, by means of the hand-wheel *h'*, the screw *h''* is turned down on the head of the drill G, thus feeding the drill down to its work in tapping the main. The drill may be operated or turned by means of a ratchet-lever or any other convenient means. When the main is perforated and the cap becomes filled with water, it can be determined by means of the small faucet *c* in the side of the cap. The opening through the main having been made, the drill is withdrawn from the opening, the latch *d* is raised, and the cap is turned without the tools being removed therefrom until the tap I is brought over the opening, when the latch is dropped between the lugs *e' e'*. By means of the tap I the opening made in the main is quickly screw-threaded and ready to receive the faucet J. The tap I being withdrawn from the opening, the cap C' is again partially revolved, with its tools attached, until the latch *d* will drop between the lugs *e'' e''*, when the faucet is readily screwed into its position. If, however, the thread on the faucet should "strip," which sometimes happens, it will only be necessary to again partially revolve the cap and tools until the latch *d* will drop between the lugs *e''' e'''*, which will bring the screw-threaded plug K over the opening in the main, and this plug being screwed into the opening, the cap may be raised and lifted off by loosening the screw-bolt C, when the faucet can be removed for repair or exchange.

There has heretofore been great difficulty experienced in placing the faucet in position in the main, arising from the liability of the fau-

cet to part from the rod by which it is centered and screwed into position. To overcome this difficulty I construct the centering-rod L with a shoulder, *l*, over which fits the coupling-ring M of the faucet. By this means I am enabled to secure the faucet to the centering-rod and screw the faucet into position without danger of dropping the faucet in the cap.

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

1. In a device for tapping mains, the drill G, independent tap I, and the faucet J, and its centering-rod L, arranged concentrically around cap C′, in combination with the said cap C′, all constructed to operate substantially as herein shown and described.

2. In a device for tapping mains, the cap C′, provided with the pivoted latch *d*, in combination with the bottom bed-plate, D, provided with the lugs *e e*, *e′ e′*, *e″ e″*, *e‴ e‴*, and the hollow saddle B and screw-bolt C, all constructed to operate substantially as and for the purpose set forth.

3. In a device for tapping mains, the drill G, independent tap I, faucet J, with its centering-rod L, and screw-threaded plug K, in combination with the cap C′ and bed-plate D, cast integral with the hollow saddle B, all constructed to operate substantially as and for the purpose set forth.

DAVID LENNOX.

Witnesses:
C. D. TAYLOR,
HENRY STONE.