

A. LETZKUS.

DEVICE FOR TAPPING MAINS.

No. 174,543.

Patented March 7, 1876.

Fig. 1.

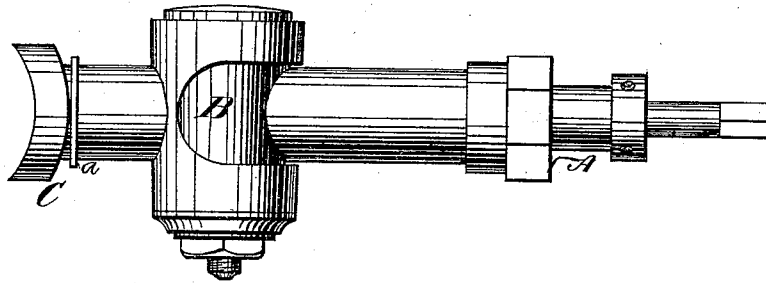


Fig. 2.

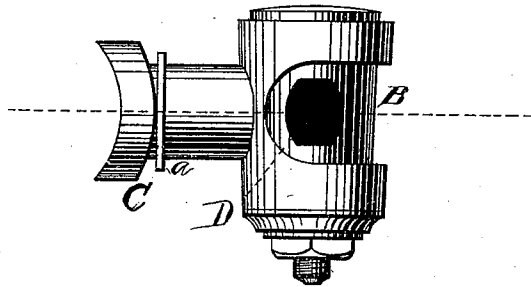
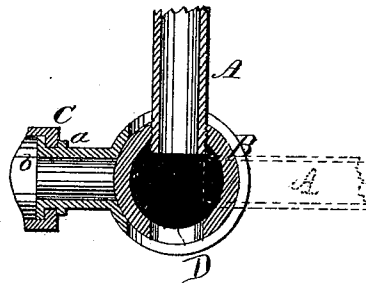
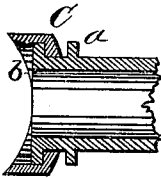


Fig. 3.

Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE

ANTHONY LETZKUS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR TAPPING MAINS.

Specification forming part of Letters Patent No. **174,543**, dated March 7, 1876; application filed October 11, 1875.

To all whom it may concern:

Be it known that I, ANTHONY LETZKUS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Tapping Mains; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a side elevation in position for drilling. Fig. 2 is the same in position for withdrawing the drill or inserting reamer or service-valve. Fig. 3 is a plan section through the line *xy* of Fig. 2. Fig. 4 is a longitudinal section of the universally-jointed saddle.

This invention relates to machines for tapping water, gas, or steam mains under pressure; and consists in the device for securing the apparatus to the main in any position, and in the construction of the valve, whereby the necessary changes in tools or the insertion of the service-valve may be effected without withdrawing the drill-rod or removing any of the parts of the device.

The saddle I make universal by constructing it with a plain joint arranged between shoulders on the end of the valve-connection. The valve effects the described end by having a horizontal slot cut in its chamber-wall for about two-thirds of its circumference, and of about the width of the drilling-cylinder.

Referring to the accompanying drawings, A represents the drilling cylinder and rod inside, with the devices for tapping the main. It is screwed or otherwise fitted into the plug B of the valve. The plug B is hollow or simply perforated through, and large enough to

allow the tapping devices and service-valve to pass through. On the side opposite the saddle portion of the valve section the walls of the valve are cut away about two-thirds around, forming a horizontal slot. This is for the purpose of making changes in the tools and inserting the service-valve without displacing any of the other parts. It is done by simply turning the drilling-cylinder and the valve-plug till the opening D in the latter registers with the slot in its chamber-walls, the water being shut off by the walls of the plug. The saddle C on the other end of the valve-section is jointed, being shouldered on each side at *a* and *b*. These shoulders allow the saddle-clip to turn freely about its axis, but prevent longitudinal movement. This construction permits the device to be attached at any angle to correspond with the conditions of the excavation.

Having fully described my invention, I claim—

1. In a machine for tapping mains, a valve having its exterior wall or casing slotted circumferentially, as and for the purposes described.

2. In combination with the terminating pipe of the valve section formed with the shoulders *a b*, the rotatory saddle-clip C, substantially as described.

3. The drill cylinder A, in combination with the revoluble plug D, perforated as described, and drill-rod, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

ANTHONY LETZKUS.

Witnesses:

JOSEPH GOODMAN,
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