

J. G. L. BOETTCHER.
Fish-Guard for Water-Pipes.

No. 202,513.

Patented April 16, 1878.

Fig. 1.

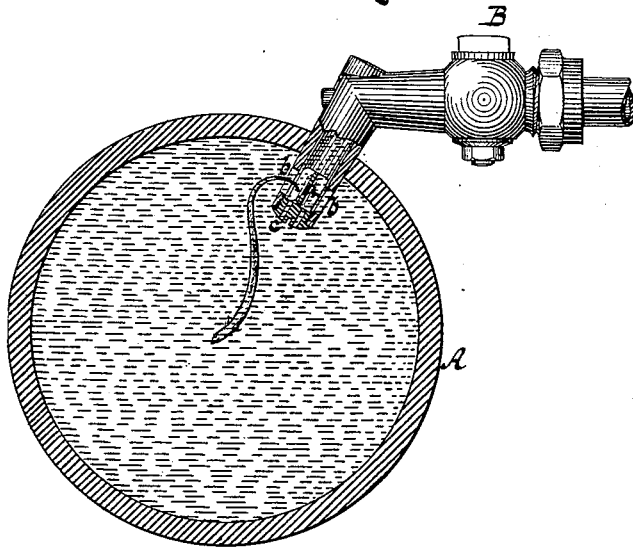


Fig. 2.

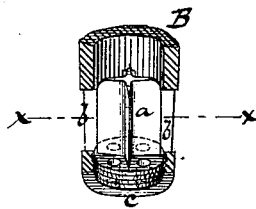
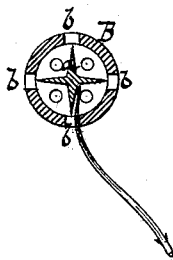


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN G. L. BOETTCHER, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN FISH-GUARDS FOR WATER-PIPES.

Specification forming part of Letters Patent No. **202,513**, dated April 16, 1878; application filed April 3, 1878.

To all whom it may concern:

Be it known that I, JOHN G. L. BOETTCHER, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Fish-Guards for Water-Pipes, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a sectional view of a water-main with my service-pipe connection. Fig. 2 is a longitudinal section of the mouth of my service-pipe connection on a larger scale than the previous figure. Fig. 3 is a transverse section of the same in the plane *x* of Fig. 2.

Similar letters indicate corresponding parts.

Water-mains used to distribute the water in cities are commonly infested with eels and small fish. These are often drawn into the service-pipes of houses, and, by stopping them up, produce serious inconvenience. Attempts have been made to obviate this difficulty by a projecting cross-bar or guard-piece arranged crosswise at the mouth of the service-pipe connection, holes being provided in the sides of said pipe-connection opposite the faces of the guard-piece; but this arrangement is attended with several serious disadvantages. The projecting guard-piece is liable to become bent or broken, particularly in driving the end of the pipe-connection into the water-main. In making such connection a hole is drilled into the water-main to receive the tapering end of the service-pipe connection; but said hole cannot be drilled clear through, because, if such should be done, a powerful jet of water would issue from the main, and the introduction of the service-pipe connection would become exceedingly difficult. In drilling the hole for the service-pipe connection, therefore, care is taken to leave a thin scale, which prevents the escape of water from the main, and which is driven in by the service-pipe connection itself.

In this operation the projecting guard-piece is liable to become broken or bent over. Furthermore, the projecting guard-piece forms no guard against small fishes, and even fishes of a larger size are liable to become sucked in to such an extent that they are unable to extricate themselves, and that they finally die

in their struggles, imparting to the water in the main a bad and unwholesome flavor.

These difficulties I have sought to overcome by my invention, which consists in the combination, with the mouth of a service-pipe connection, of a partition or partitions situated in the interior of said mouth, and apertures formed in the sides of the connection near its mouth, the edges of the partition or partitions being opposite to the centers of said apertures, so that each of the wings of the partition forms a stop, which effectually prevents a fish from being sucked into the service-pipe connection or from becoming wedged in one of the apertures; and, furthermore, the partition is effectually protected from injury. The mouth of the service-pipe connection is closed by a plug, to which the partition may be secured.

In the drawing, the letter A designates a water-main in which is secured my service-pipe connection B. In the mouth of this service-pipe connection is placed a partition, *a*, (best seen in Fig. 3,) the edges of which are opposite to the centers of apertures *b* in the sides of the connection B, near its inner end or mouth. These apertures are oblong, their length being equal, or nearly so, to the length of the partition, and the mouth of the service-pipe connection is closed by a screw, *c*.

In the example shown in the drawing the partition is secured to this screw; but, if desired, the inner sides of the pipe-connection may be provided with grooves for the reception of the edges of the partition, and in this case the screw is made detached from the partition, and serves to retain the same in position. By this arrangement the partition is protected against injury, and each wing of said partition forms a guard, which prevents a fish from being sucked in beyond the distance of the radius of the service-pipe, as indicated in Fig. 3. It is therefore impossible that a fish should become so wedged in the mouth of the service-pipe that the same is not able to extricate himself. The mouth of the service-pipe cannot become stopped up, and the guard is so situated that it is not liable to become injured when the pipe-connection is driven into the water-main.

The partition *a*, as shown in the drawing, is

cross-shaped; but it may be made in the form of a single plate extending transversely across the interior of the service-pipe.

Instead of the screw *c*, a plug of any suitable form may be used, and fastened by solder or other suitable means.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the mouth of a service-pipe connection, of a partition or partitions situated in the interior of said mouth, and apertures formed in the sides of the connection near its mouth, the edges of the partition or partitions being opposite to the centers of said apertures, substantially as and for the purpose shown and described.

2. The combination, with the mouth of a service-pipe connection, of a cross-shaped partition situated in the interior of said mouth, and apertures formed in the sides of the con-

nection near its mouth, the edges of the partition being opposite to the centers of said apertures, substantially as and for the purpose shown and described.

3. The combination, with the mouth of a service-pipe connection, of a plug supporting a partition or partitions and fitting into said mouth, and apertures formed in the sides of the connection near its mouth, the edges of the partition or partitions being opposite the centers of said apertures, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand and seal this 2d day of April, A. D. 1878.

JOHN G. L. BOETTCHER. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.