P. MUNZINGER.

Dip-Pipe of Hydraulic Gas-Main

No. 167,555. Patented Sept. 7, 1875.

FIG 1

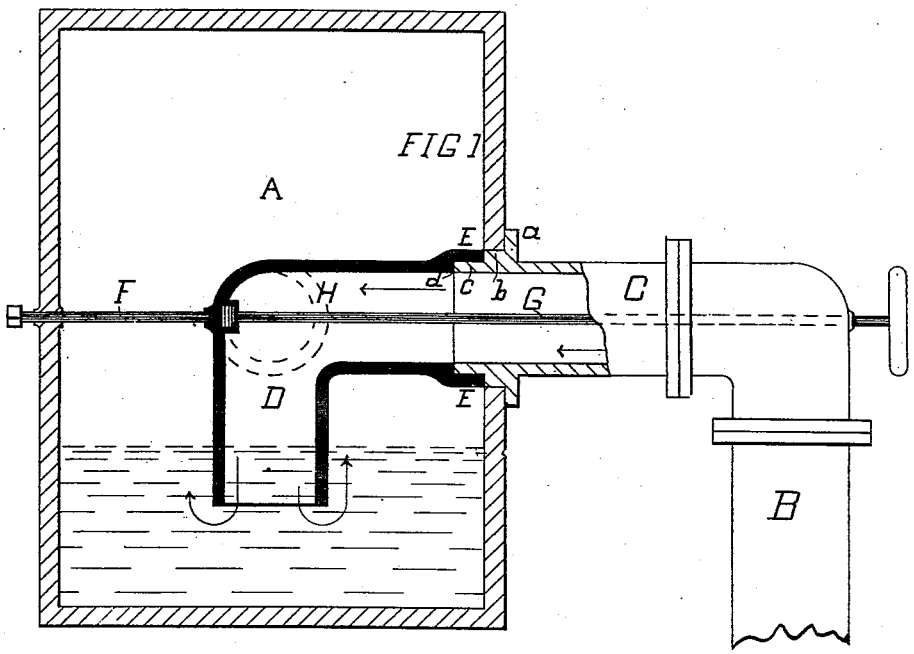
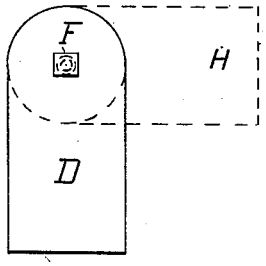


FIG 2



WITNESSES

Horace L. Holmboldt

Geo. Gulbrandsen

INVENTOR

Peter Munzinger

by Francis D. Pastorius

Atty

UNITED STATES PATENT OFFICE.

PETER MUNZINGER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO MORRIS, TASKER & CO., OF SAME PLACE.

IMPROVEMENT IN DIP-PIPES OF HYDRAULIC GAS-MAINS.

Specification forming part of Letters Patent No. **167,555**, dated September 7, 1875; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, PETER MUNZINGER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in the Dip-Pipe of a Hydraulic Gas-Main, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

The dip-pipe, or that part of the ascension-pipe situated in the hydraulic main, turns loosely and gas-tight against the straddle-pipe, by which its exit-end can be either immersed in the water of the hydraulic main or turned and raised out of it, whereby the retort can have a back pressure or not. The joint made by the straddle-pipe or transverse part of the ascension-pipe, with the dip-pipe, is constructed as follows: The adjacent end of the straddle-pipe has a collar or flange by which it is bolted to the hydraulic main, an extension which fits snugly the opening into the main, and a reduced extension, which takes into the socket-end of the dip-pipe. A screw, projecting through the opposite side of the main, forces the straddle and dip pipes in perfect contact. The dip-pipe is turned by a rod, which extends through it and the straddle-pipe, one end being fixed to the dip-pipe. The other passes gas-tight through an opening in the straddle-pipe, and terminates in a handle or wheel.

Figure 1 is a vertical section through the hydraulic main, the dip and straddle pipes. Fig. 2 is an end view of the dip-pipe; the full and dotted lines show its positions.

A is the hydraulic main; B, the retort ascension-pipe; C, the straddle-pipe or transverse part of the ascension-pipe, and D the dip-pipe. The end of the straddle-pipe has three diameters; the first, *a*, is the flange by which it is bolted to the hydraulic main; the second, *b*, fits gas-tight the opening into the main; the third and smallest, *c*, extends into the hydraulic main and forms contact with the dip-pipe by taking into its socket or enlarged end E. The contacting surfaces of the straddle and dip pipes are faced to form close gas-tight joints. The end of a bolt, F, which screws through the opposite side of the main, bears against the dip-pipe and perfects its juncture with the straddle-pipe. The rotary or turning motion of the dip-pipe against the straddle-pipe is caused by a rod, G, which enters the straddle-pipe, and is secured to the dip-pipe by a recessed nut or suitable device.

The gas, as generated, passes from the retort through the ascension and straddle pipes into the dip-pipe, and rises through the water in the main. The mouth of the dip-pipe being below the surface of the water, causes a back pressure of the gas on the retort, to remove which the dip-pipe is turned by the rod G until its end is raised above the water, as shown by the dotted lines H.

I claim as my invention—

1. The combination, with the hydraulic main A and the ascension-pipe B, or its extension C, of a rotary dip-pipe, D, for the purpose shown and described.

2. The combination of the hydraulic main A, straddle-pipe or transverse extension C of the ascension-pipe, its flange *a* and extensions *b c*, and the dip-pipe D, with its enlargement E, substantially as shown and described.

3. The combination of the hydraulic main A, straddle or extension C, dip-pipe D, and bolt F, substantially as shown and described.

4. The combination of the hydraulic main A, straddle or extension C, dip-pipe D, bolt F, and rod G, substantially as shown and described.

In testimony whereof I hereunto sign my name in the presence of two subscribing witnesses.

PETER MUNZINGER.

Witnesses:

FRANCIS D. PASTORIUS,

THOMAS C. WARWICK.