(No Model.)

T. LEE.

STRAINER FOR WATER UNDER PRESSURE.

No. 376,324. Patented Jan. 10, 1888.

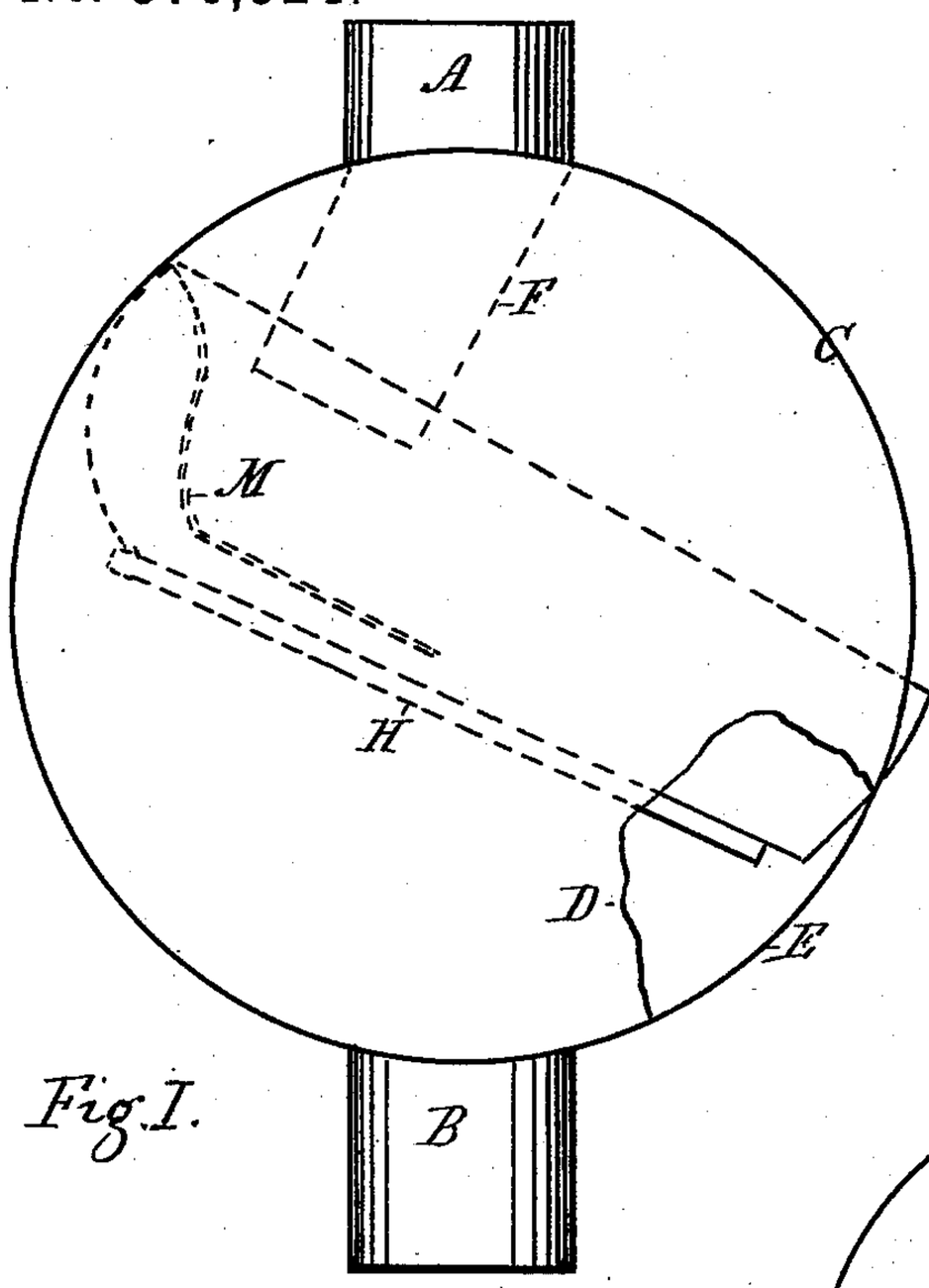

Fig. I.

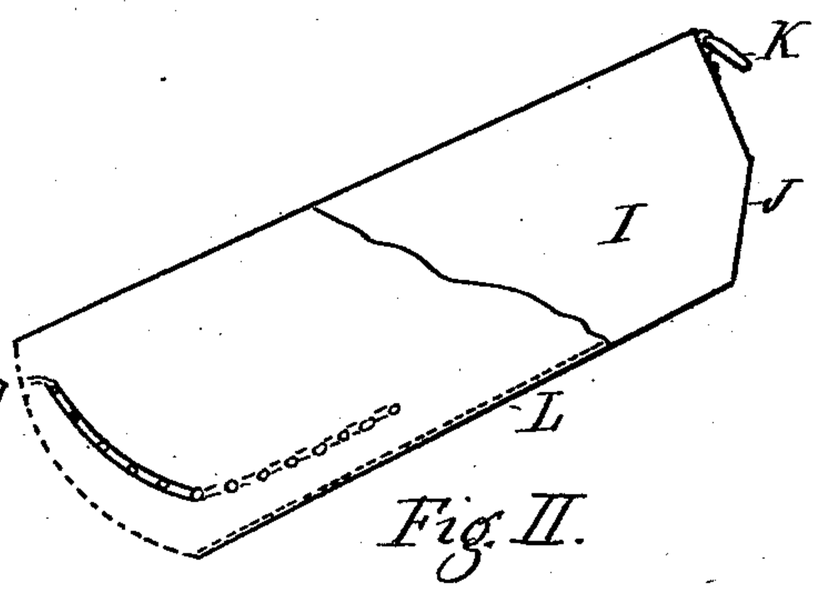

Fig. II.

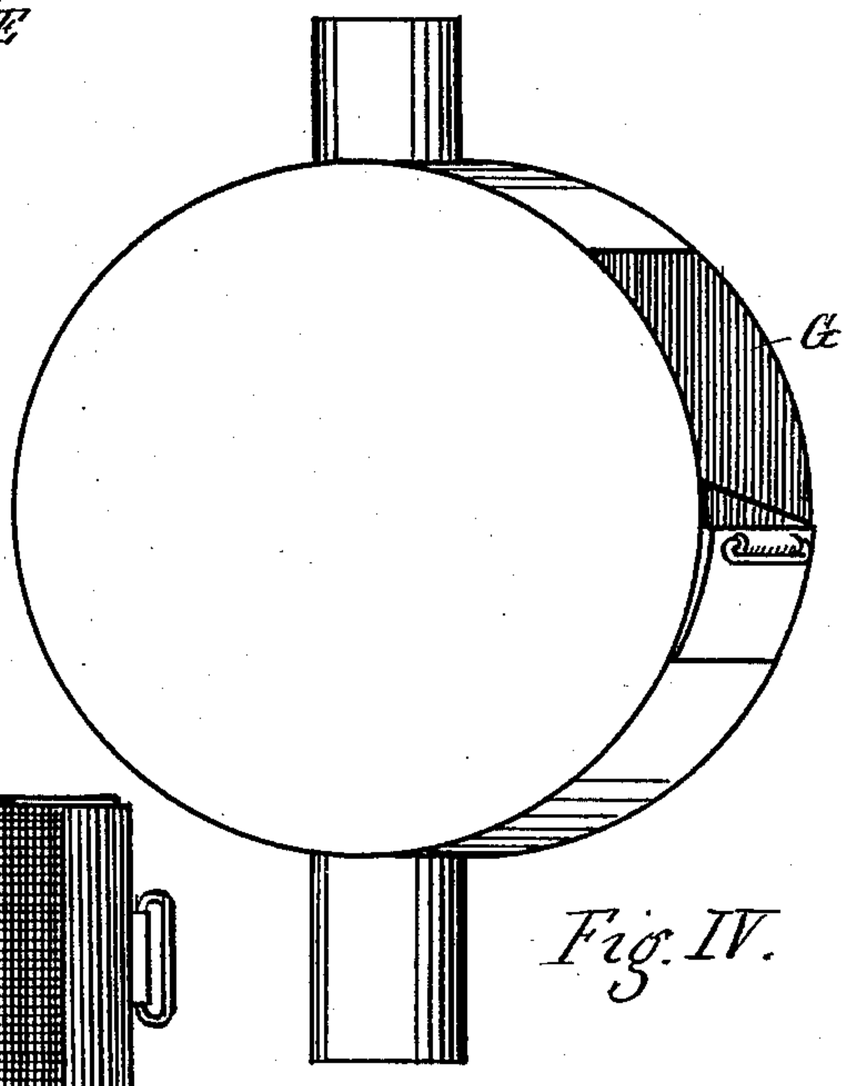

Fig. IV.

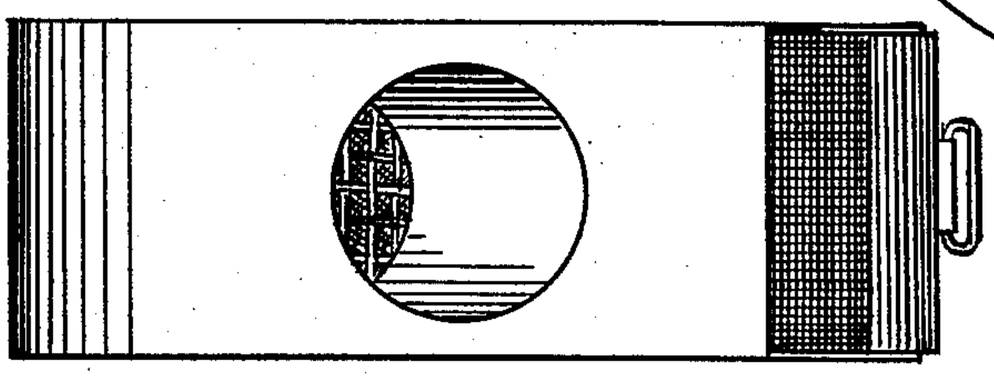

Fig. III.

WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS LEE, OF CINCINNATI, OHIO.

STRAINER FOR WATER UNDER PRESSURE.

SPECIFICATION forming part of Letters Patent No. 376,324, dated January 10, 1888.

Application filed September 6, 1887. Serial No. 248,959. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LEE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Strainers for Water Under Pressure, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side view, partly in section, of my strainer for water under pressure. Fig. 2 is a side view, partly in section, of the removable drawer; Fig. 3, a top view of the strainer, and Fig. 4 a perspective front view of the same.

The object of this invention is to construct a strainer for water which flows through pipes under pressure; and it consists of a cylinder, preferably as large or slightly larger between the heads than the diameter of the pipe, which has on its front upper side an opening and on the inside two guideways, the rear ends of which are higher than their forward ends, on which guides are placed a drawer having a wire-cloth bottom, and directly above this wire-cloth bottom and at the rear end of the drawer a coarse curved wire mesh. The supply-pipe, which enters from above, is inclined rearwardly within the cylinder, so that it projects at a right angle to the slant of the drawer, while the discharge-pipe passes out through the lower side of the drum on a direct line with the supply-pipe above, all of which will now be specifically set forth.

In the accompanying drawings, A represents the supply-pipe, and B the discharge-pipe, located on a line with each other on the opposite sides of a drum, C. The drum is composed of two heads or disks, D, secured to a band or ring, E, a short distance apart, the space between these heads being equal to the diameter of the supply and discharge pipe, or a trifle larger, so as to receive different-sized pipes should it be desired to change the pipes at any time. The supply-pipe A has an extension, F, within the drum, which projects rearwardly, as shown in Fig. 1. The ring E on the front side is cut away, as shown at G, so as to provide an opening, and the heads or disks D are each provided inside with a cleat or guideway, H, the rear ends of which are elevated or higher than their forward ends. These cleats or guideways are designed to receive through the opening G a drawer, which will now be described.

The drawer H is composed of side pieces, I, placed a suitable distance apart to fit snugly between the heads of the drum. The rear end of the drawer is curved, and the front end has a retreating angle, J, so that when it is placed in the opening G and pushed back in the drum it will move up the inclined guideways until the rear end comes in contact with the other side of the drum. While in that position the retreating end or angle J comes in contact with the ring E, and the frictional contact therewith holds the drawer in position. The forward end of the drawer has a loop or ring, K, by means of which it may be withdrawn.

The bottom or rear end of the drawer is composed of fine wire-gauze, L. The rear half of the drawer has, a short distance above the gauze bottom, a coarse wire-cloth, M, the rear end of which is attached to the upper end of the drawer, from which point it extends downwardly and forwardly in the form of a curve which conforms approximately to the curve of the gauze bottom below it. The sides of the wire cloth M are then soldered to the sides I. It will thus be seen that the bottom L is approximately at right angles to the direction of the supply-pipe F within the drum, and the whole volume of the water from the supply-pipe will therefore strike first the coarse wire-cloth M at its curved point and then pass through the gauze bottom at its extreme rear end. By this form of construction and arrangement the force of the water against the rear end of the drawer washes forward the débris, so that the rear straining end is always clear and unobstructed and permits a free flow for the water. When the débris is strained from the water and is washed forward and deposited in the front end of the drawer, the latter may be removed and cleansed and again returned.

This strainer, as thus constructed, can be cheaply made, cannot get out of order, and is made in the best possible form to assure a free flow of water.

I would also call attention to the fact that the strainer as here shown, without any modifications, can be used on a horizontal pipe to

strain water which flows through a pipe under pressure or otherwise.

What I claim as new is—

1. In a water-strainer, a drum having the supply-pipe on one side and the exhaust-pipe on its opposite side on a direct line, said supply-pipe having a rearwardly-inclined or inwardly-projecting extension, in combination with a forwardly-inclined drawer having wire-mesh bottoms, substantially as herein set forth.

2. A drum having oppositely-disposed supply and discharge pipes, in combination with a removable drawer having a bottom of fine wire-gauze and a raised bottom of coarse wire-cloth, substantially as herein set forth.

3. A drum having oppositely-disposed supply and discharge pipes, the inner end of the supply-pipe being disposed at an angle, in combination with two grades of wire-cloth mesh between the inner ends of said pipes disposed at approximately right angles to the discharge end of the supply-pipe, whereby the débris strained from the water is washed away, so that the straining end is always clear and unobstructed, substantially as herein set forth.

4. In strainers, the combination of a drum having oppositely-disposed supply and discharge pipes, the open side, and the inclined guideways within, with the removable drawer having two grades of wire-cloth therein, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 1st day of September, 1887, in the presence of witnesses.

THOMAS LEE.

Witnesses:
J. S. ZERBE,
ROBT. S. MILLAR.