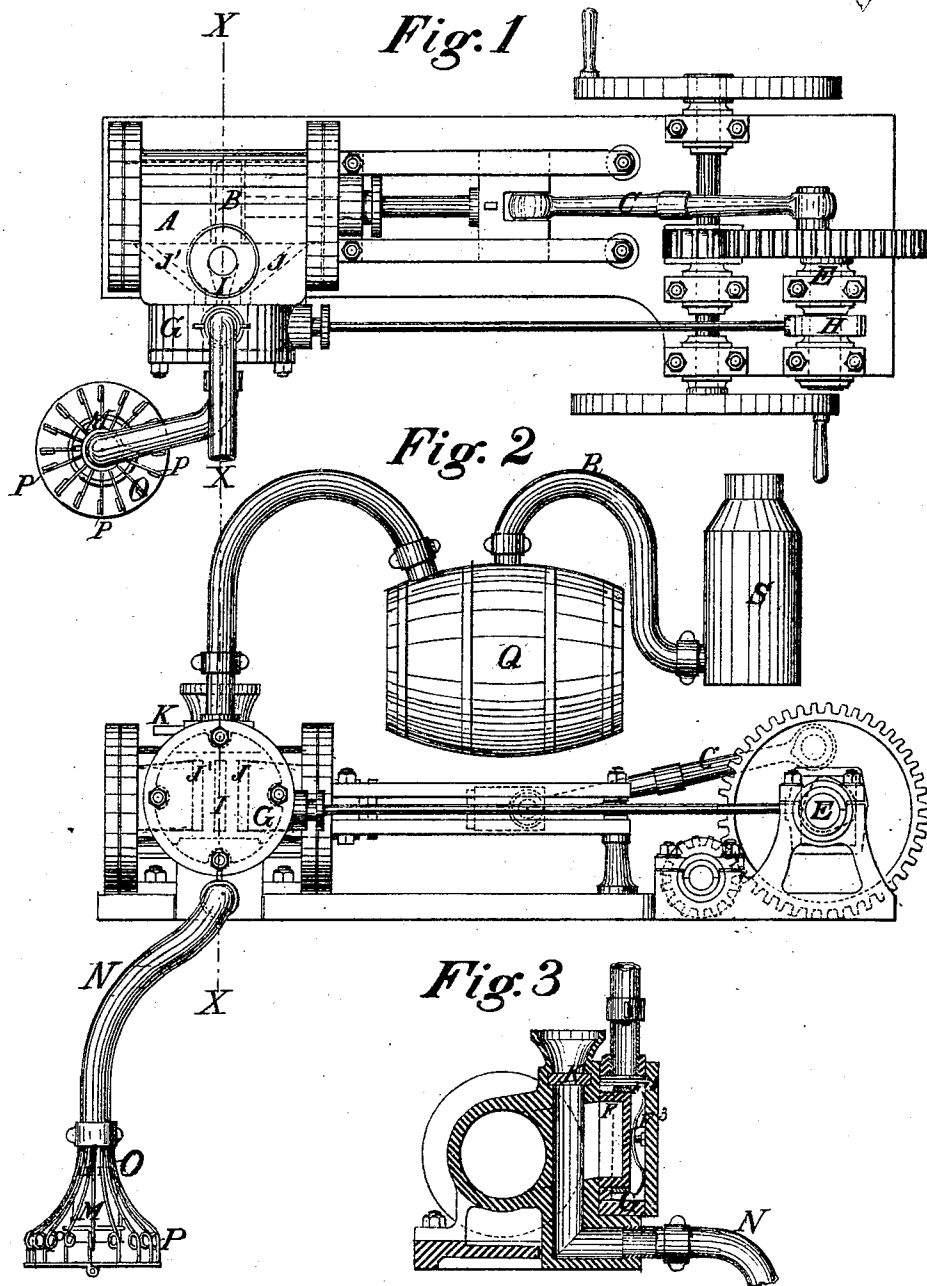


F. J. WILDENTHALER.

Apparatus for Emptying Sinks and Cesspools.

No. 141,410.

Patented July 29, 1873.



Witnesses:

Wm. S. Johnson
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Inventor:

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UNITED STATES PATENT OFFICE.

FRANCIS J. WILDENTHALER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR EMPTYING SINKS AND CESSPOOLS.

Specification forming part of Letters Patent No. **141,410**, dated July 29, 1873; application filed May 26, 1873.

To all whom it may concern :

Be it known that I, FRANCIS JOSEPH WILDENTHALER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements on J. G. Berger's machine, patented November 2, 1869, No. 96,385, for Emptying Sinks and Cesspools; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof, to enable a person skilled in the art to make and use the said invention.

The nature of this invention consists in an arrangement of inlet-port to a suction-pump, by which it is very easy to prime or start the pump in operation, and to arrest and remove any foreign bodies from the valve-box; also, in an arrangement of valve-operating mechanism by which the largest possible opening of the valve is effected and maintained throughout nearly the whole piston travel; also, in an improved construction of strainer or guard for protecting the foot-valve from obstructions, and by which it is readily accessible, and in a method of combining the delivery-pipe and the receptacles into which the contents of the sink are discharged with a furnace, by which any noxious vapors or miasma are burned and destroyed.

I will now proceed to particularly describe the manner in which the said invention is to be made and operated, referring in so doing to the drawing annexed and letters of reference marked thereon.

Figure 1 shows a plan; Fig. 2, a side elevation; and Fig. 3 a section across the pump-cylinder in the plane indicated by the dotted lines X X in Figs. 1 and 2.

The same letters of reference apply to the same parts in the several figures.

A represents a pump-cylinder; B, a piston worked by a connecting-rod, C, from a crank, D, in the shaft E. F is a sliding valve, working in a valve-box, G, and resembling in construction the sliding valves in common use in locomotive steam-engines. The valve F is operated by a cam, H, on the shaft E, receiving motion from the cam when the piston is at the ends of its stroke, and, practically, at rest. I is receiving or inlet port, and J and J' outlet-ports, on which the valve works.

The inlet-port I is made with an L-shaped channel, receiving the semi-fluid matter to be pumped at the lower end, and having a valve or cock, K, at the upper end, terminating in a bowl or funnel, which can be expeditiously opened and filled with water, and again closed so as to prime or start the pump in operation. The shape of the channels leading from the ports J and J' to the ends of the cylinders, is shown in the dotted lines in Figs. 1 and 2, and is such that any air or gas is thus effectually expelled. They ascend from the highest point in the pump-cylinder to the upper ends of the ports J and J', by introducing water through port I when the pump is worked. The valve F is held in a ring or yoke, F¹, so that in the event of any solid or unyielding body finding its way into the cavity F² of the valve, and projecting into either of the ports J or J' during the motion of the valve F, the valve can lift it in the yoke F¹, and so soon as the obstruction has passed out of the way, the valve again is pressed to its seat by the spring F³ on the lid of the valve-chest. The connection from the foot-valve M to the inlet I of the pump is made by means of a flexible tube, N, stiffened by hoops or spiral springs to prevent collapsing from atmospheric pressure. The foot-valve M is guarded by a bell-shaped cage, O, with a closed bottom, and capable of opening at the top so as to readily withdraw the suction-pipe without raising the cage from the well. The cage may be formed with hinges at the bottom, or with springs P near the point of attachment of the bars to the bottom. The upper ends of the bars are, when closed, confined by a ring or collar, which, when drawn upon the tube N, permits the cage to open, and the foot-valve to be inspected or cleaned. The discharge of the pump is delivered from the valve-chest G through a flexible tube into a fluid-tight receptacle, Q, and the air or gas that is displaced or otherwise discharged from the vessel Q is conducted through a tube, R, to a furnace, S, where it is burned.

This machine may be operated by hand or by steam-power, in which latter case the tube R may be terminated in the boiler-furnace, and the special furnace dispensed with.

What I claim as my invention, and desire to secure as such by Letters Patent, is—

1. The L-shaped inlet-channel provided with a valve. K, for priming the pump, as shown and described.

2. The valve F, combined with the yoke F¹ and spring F³, to operate on the ports J and J', substantially as shown and described.

3. The cage O, with closed bottom, arranged to open at the top, as and for the purpose set forth.

4. The inclined channels leading upward from the highest point in the cylinder to the valve F, and, in combination with said valve, operating as set forth and described.

FRANCIS JOSEPH WILDENTHALER.

Witnesses:

JAMES P. PETIT,
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