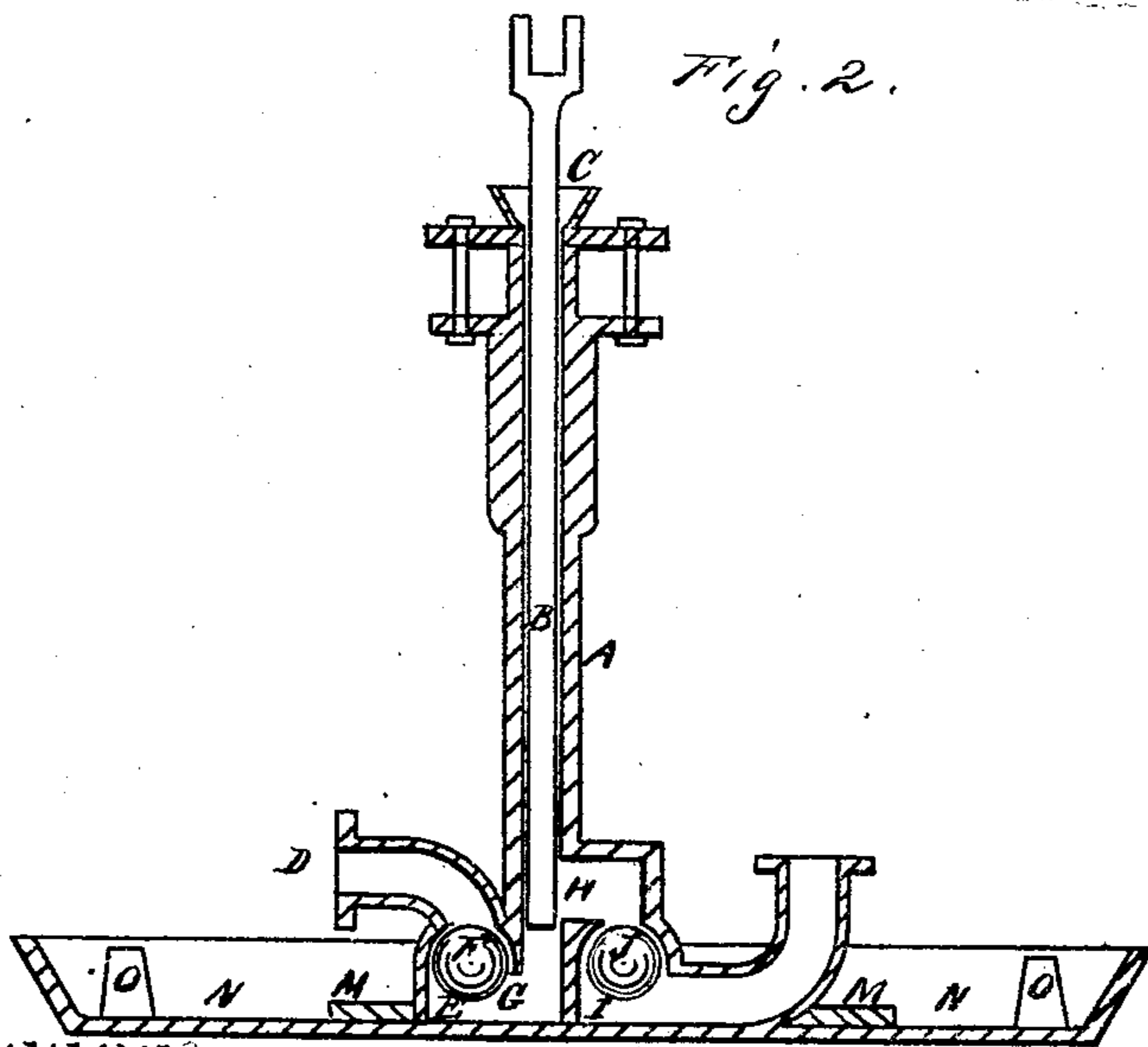
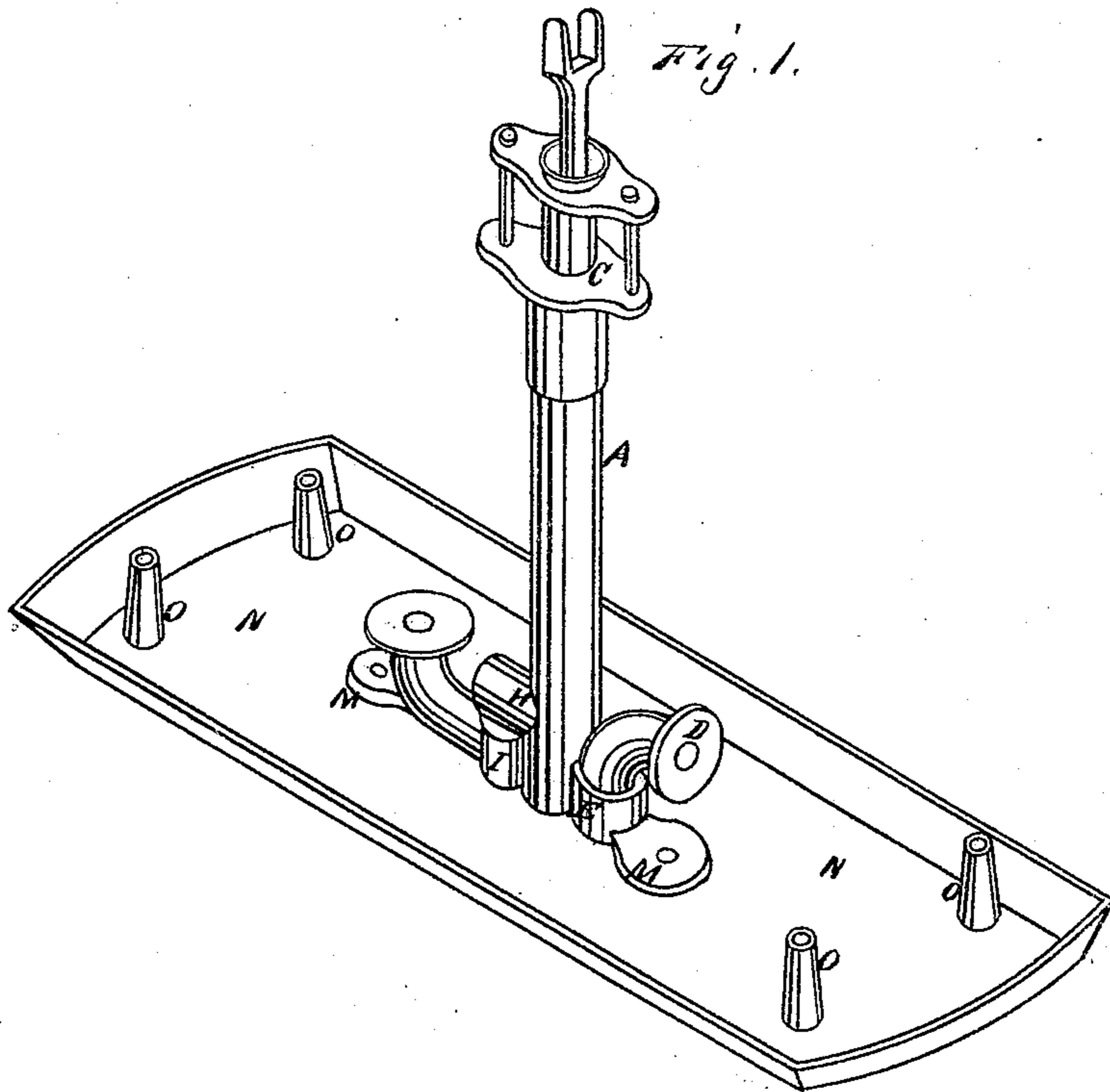


**M. P. BOSS.**  
**Quicksilver Pumps.**

No. 145,718.

Patented Dec. 23, 1873.



Witnesses

*John. L. Boone*

*C. Milton Richardson*

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*by Sewey & Co.*  
*attys*

# UNITED STATES PATENT OFFICE.

MARTIN P. BOSS, OF BULLIONVILLE, NEVADA.

## IMPROVEMENT IN QUICKSILVER-PUMPS.

Specification forming part of Letters Patent No. **145,718**, dated December 23, 1873; application filed November 15, 1873.

*To all whom it may concern:*

Be it known that I, MARTIN P. BOSS, of Bullionville, Lincoln county, State of Nevada, have invented a Quicksilver-Pump; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

The object of my invention is to provide a pump which can be employed for elevating quicksilver, and which will overcome the difficulty met with in pumping this metal, from its great weight and consequent action in keeping all lifting-valves, of whatever material, open by floating them up, and thus preventing the pump from working. By my construction, I am also enabled to so arrange the different parts that no leakage or waste of the metal will occur.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my device. Fig. 2 is a sectional elevation.

A is the barrel of my pump, within which the piston B moves, through a suitable stuffing-box, C. D is the induction-pipe, having below it a chamber, E, within which the valve F works.

Any suitable form of valve may be employed, being made to open downward; but I prefer to use a ball, which may be of iron, and the chamber E serves as a cage within which it works.

A passage, G, opens from the bottom of the chamber E into the pump-cylinder below the piston. Another passage, H, extends from the opposite side of the pump-cylinder, and opens into the chamber I, which is situated below the passage H. This chamber has also a down-

wardly-opening valve, J, and from below this valve a passage, K, opens into the discharge-pipe L. The whole of this mechanism may be bolted by means of lugs M into the bottom of the basin or tray N. This tray is secured wherever desired by means of bolts, which pass down through the nipples or standards O. These standards are cast with the tray N, and by this means I am enabled to save any quicksilver which may leak from the pump.

The operation will be as follows: The piston of the pump being drawn up, quicksilver will be drawn into the pump-barrel through the pipe D, valve F, and chamber E. When the piston is again forced down, the valve F, floating upon the quicksilver, will be immediately closed, and the valve J will be forced open, thus allowing the quicksilver to escape into the passage L. The valve J will also be floated by the quicksilver, and the two valves will thus be kept to their seats.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The pump A, with its induction and eduction pipes D L, in combination with the chambers E I, with their downwardly-opening valves F J, when the whole is constructed to operate substantially as and for the purpose herein described.

2. In combination with the pump, constructed as described, the tray N, with its hollow bolt-standards O, substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand and seal.

MARTIN PRIOR BOSS. [L. S.]

Witnesses:

J. M. HANFORD,  
B. H. HEREFORD.