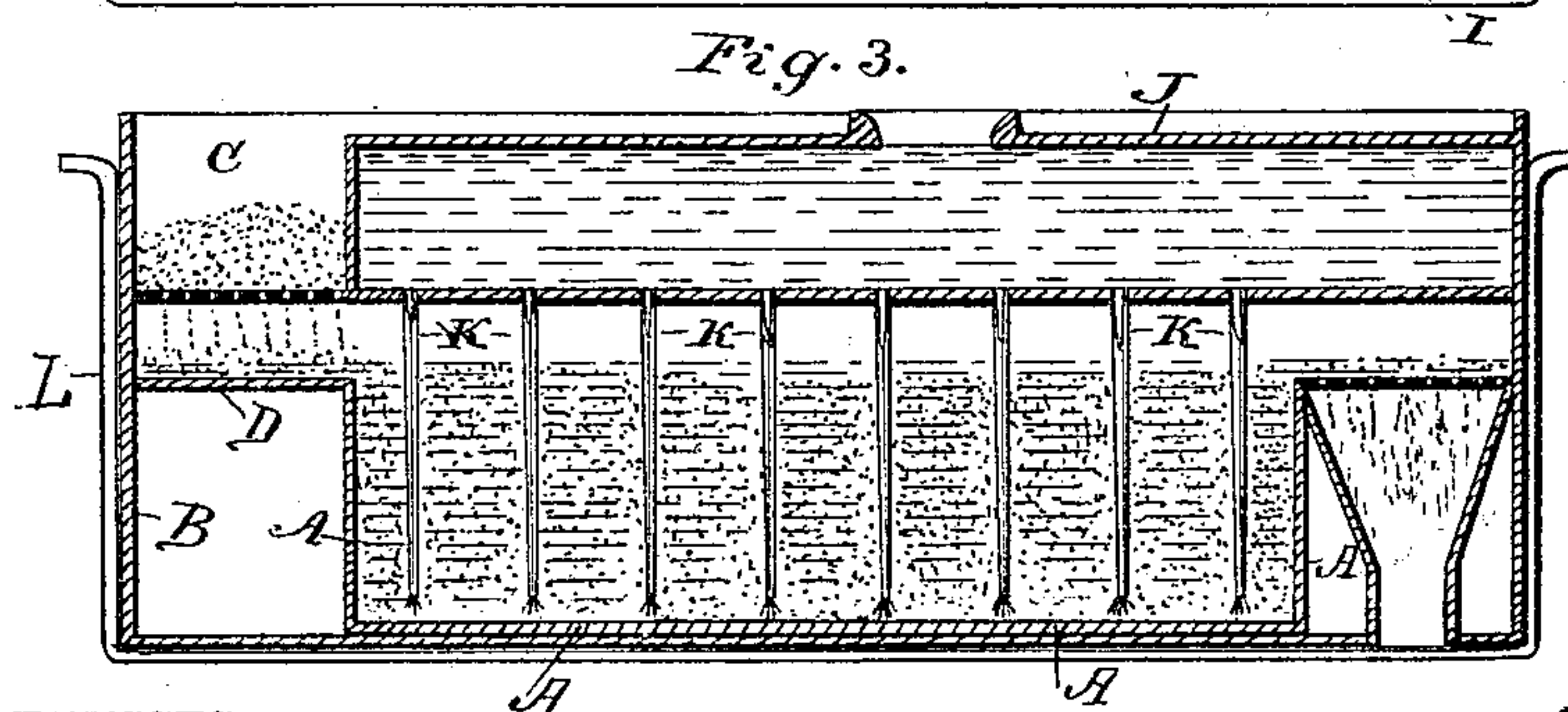
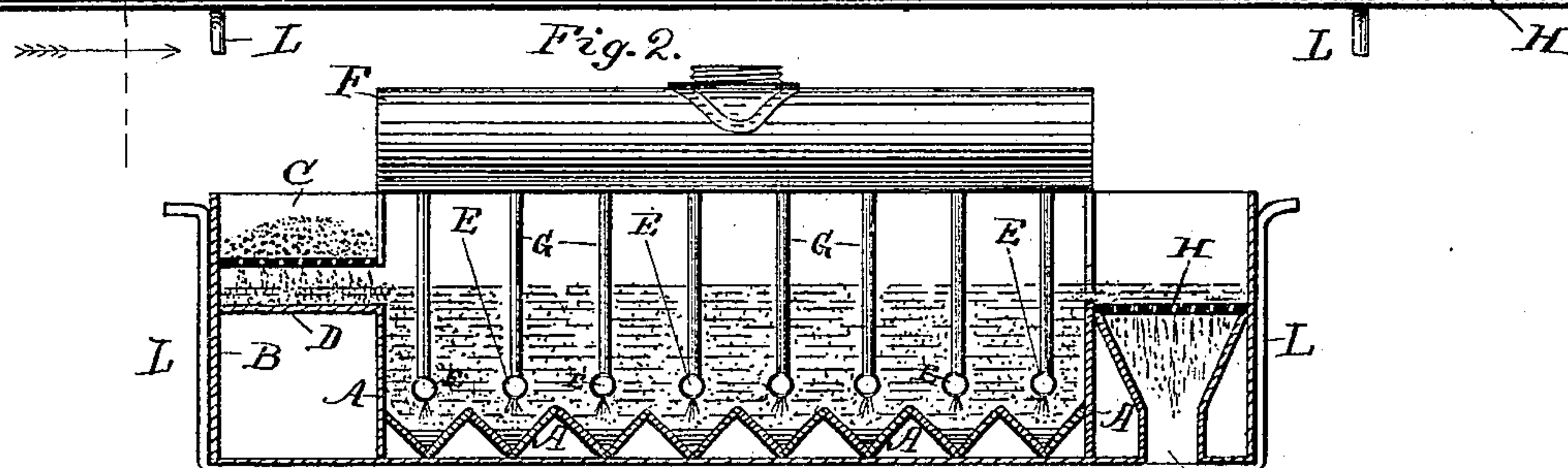
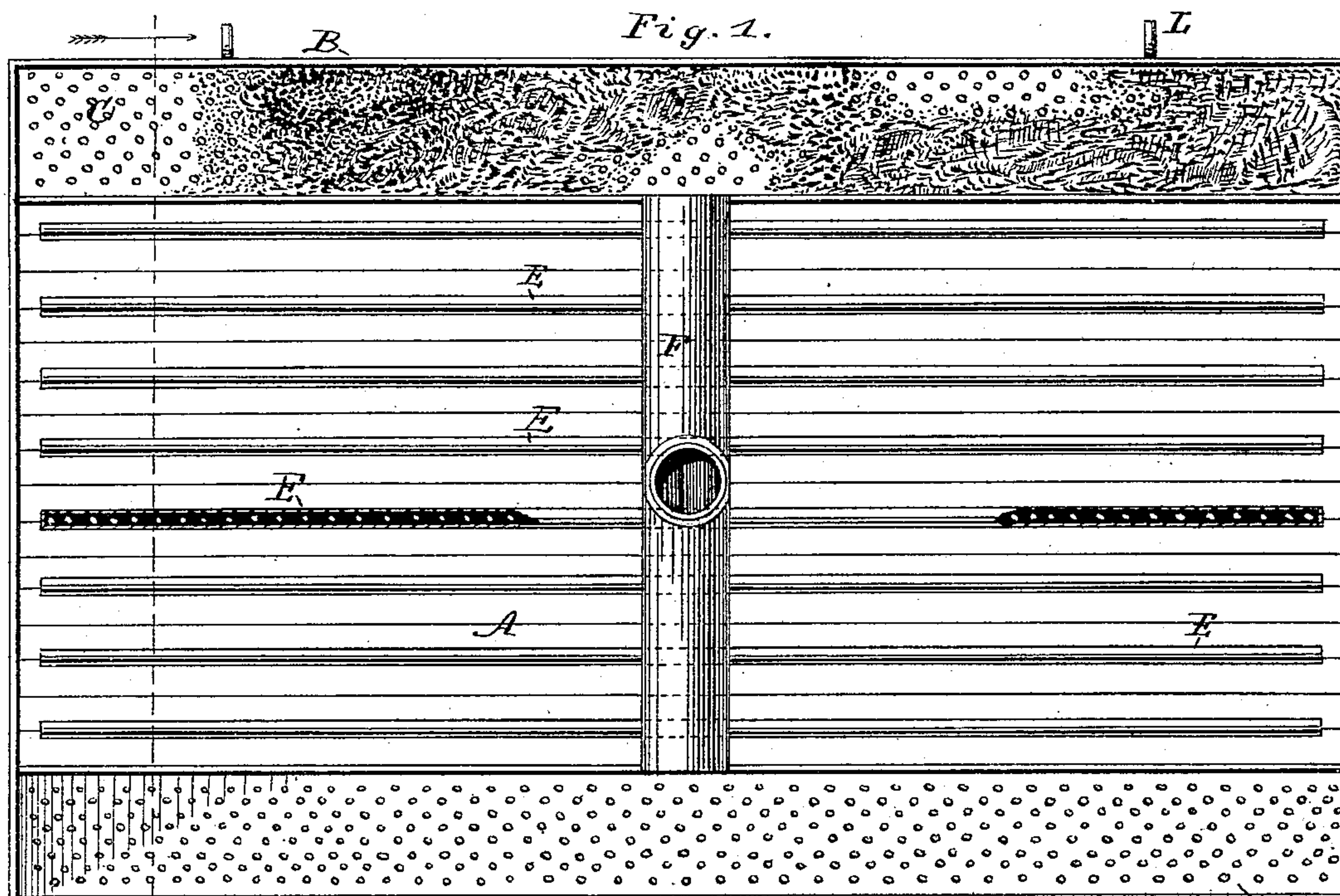


(No Model.)

N. SEYMOUR.  
GOLD SEPARATOR.

No. 270,492.

Patented Jan. 9, 1883.



WITNESSES:  
Thos. Houghton.  
A. G. Lyne.

INVENTOR:  
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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

NELSON SEYMOUR, OF ERIE, PENNSYLVANIA.

## GOLD-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 270,492, dated January 9, 1883.

Application filed July 24, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, NELSON SEYMOUR, of Erie, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Gold-Separators, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

This invention relates to gold-separators which are adapted to receive a vibratory movement to cause the particles of gold to sink through the pulp to the bottom of the vessel; and the invention consists of the novel construction hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of my gold-separator. Fig. 2 is a transverse sectional view, and Fig. 3 is a modified form of apparatus.

The receptacle, consisting of the pan A, which may be supported in a suitable vibratory box, B, is provided with a perforated trough, C, at one side, and a shelf, D, arranged underneath said trough to convey the ground ore or sand to the interior of the pan. Along the bottom of the pan, on the inside thereof, and at a suitable distance above the same, is arranged a series of water-pipes, E, which communicate with a common supply-pipe, F, arranged transversely thereto at the top of the pan, and having branches G, extending down to the pipes E, respectively. The pipes E are suitably perforated along their lower sides to discharge small jets of water downward toward the bottom of the pan. At the opposite side of the pan from the trough C is provided a perforated plate, H, which is arranged in a horizontal position, and forms, together with the opening I, a discharge for the sand, &c., after the gold has been separated therefrom. The bottom of the pan may be either plane, as shown in Fig. 3, or corrugated, as shown in Fig. 2. In the latter case the pipes E are arranged above the depressions formed by the corrugations, in order that the bath of quicksilver which is to be used shall be immediately underneath the jets.

As shown in Fig. 3, a tank or water-box, J, may be arranged above the pan A, and a series of pendent pipes, K, communicating therewith, and having their discharge-orifices near the bottom of the pan, may be substituted for the pipes E and G. Various other arrangements of the water-pipes may be used at pleasure, provided the jets are adapted to stir up the sand at the bottom of the pan and allow the particles of gold to gravitate to the bottom.

When the quantity of ground ore or sand fed into the pan rises to the level of the plate H the sand and other waste matter will, owing to the agitation produced by the jets, gradually pass out at the discharge-opening as it overflows the said plate, and the gold, including the finest particles thereof, will be collected in the quicksilver bath in the bottom of the pan.

L L are supporting-rods, by which the device is to be suspended in order that a vibratory motion may be communicated thereto.

I am aware that downward-discharging pipes have before been used for the purpose of supplying water to dilute a mass of pulp in a gold-separator, and I therefore do not claim such a feature, broadly.

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

The gold-separator comprising a receptacle adapted to hold a bath of quicksilver in its bottom, a series of pipes adapted to discharge jets of water downward in direct contact with the bath of quicksilver, a feed-trough and overflow-outlet arranged above the bottom, and means of suspension adapting it to receive a vibratory movement, substantially as and for the purpose specified.

NELSON SEYMOUR.

Witnesses:

A. G. LYNE,  
SOLON C. KEMON.