J. CLINGMAN.

FLOATS FOR CARBURETERS.

No. 190,419. Patented May 8, 1877.

Fig. 1.

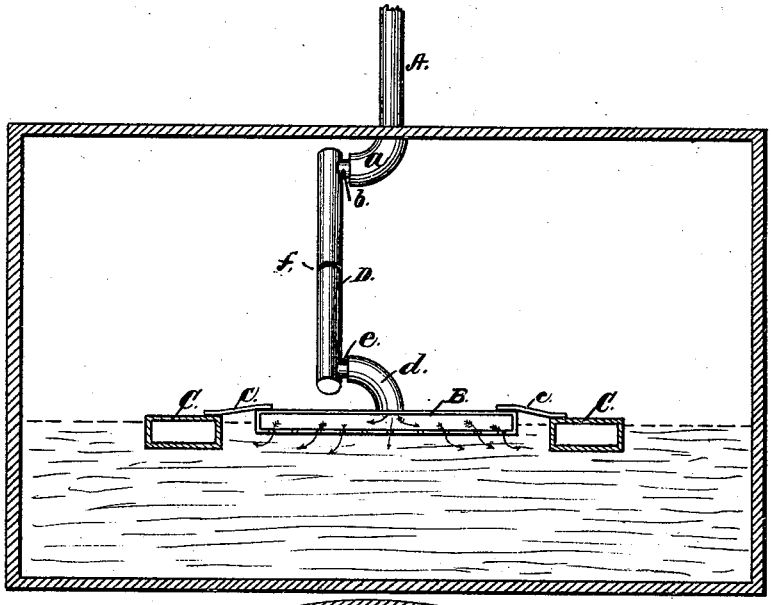


Fig. 2.

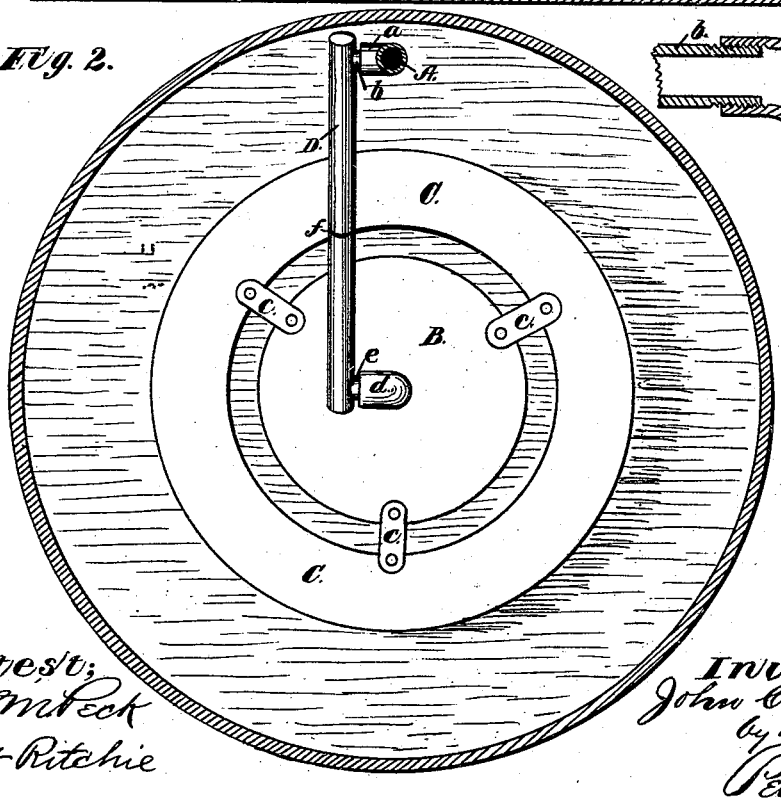
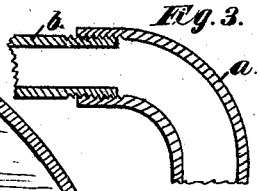


Fig. 3.



Witnesses;
Chas. M. Peck
Wm. Ritchie

Inventor;
John Clingman
by his Attys
Peck & Co.

UNITED STATES PATENT OFFICE.

JOHN CLINGMAN, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO DENNIS N. KELLEY AND CHARLES H. WARE, OF SAME PLACE.

IMPROVEMENT IN FLOATS FOR CARBURETERS.

Specification forming part of Letters Patent No. **190,419**, dated May 8, 1877; application filed March 21, 1877.

To all whom it may concern:

Be it known that I, JOHN CLINGMAN, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Floats for Carbureters; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of my invention is to provide an induction-float for the air or gas, which shall be self-regulating, and shall oblige the air or gas to pass through an unchanging ascertained volume of liquid hydrocarbon, no matter what quantity the vessel may contain, and which, from its construction, is self-adjusting, in order to allow the float to maintain constantly a level position independent of the position of the containing vessel or tank.

In the accompanying drawing, Figure 1 represents a side elevation of my improved apparatus in central section. Fig. 2 is a plan view of the float in the vessel, the top of the vessel being removed.

The induction-pipe A, for the air or gas, is introduced through the top of the vessel containing the gasoline at one side, as seen in Fig. 2. Connected to its end at the top of the vessel is an elbow, *a*. In this elbow (shown enlarged and in section in Fig. 3) is a joint-piece, *b*, with a thread upon it, that works in a female thread in the elbow. This connection is such that an easy hinge joint is formed, which is also gas-tight. B represents a hollow sheet-metal disk, with its bottom side perforated. This disk is supported within an annular sheet-metal air-tight float, C, by means of connecting-pieces *c*. From the top center of the disk proceeds an elbow, *d*, with a hinged joint-piece, *e*, similar in construction to the elbow *a* and joint *b*.

A pipe, D, connects the pieces *b* and *e*. This pipe is in two parts, connected by a swivel-joint, *f*, of any suitable construction, so as always to allow the float to maintain a level position. When the vessel is filled with gasoline or other liquid hydrocarbon, the float C sustains the disk B upon its surface, so that it is only about half submerged, as seen in Fig 1. The gas or air admitted through the pipe A emerges from the perforations in the bottom of the disk, and becomes charged with the vapor of the gasoline, naphtha, or other oil. By means of the hinged connections of the pipe D, the disk always maintains the same relative position with the surface of the gasoline, so that as the latter becomes used up and decreases in bulk, the disk falls with it, and the escaping gas from the disk always passes through the same volume of gasoline. By placing weights upon the float the disk may be submerged to any desired depth. The gas, thus enriched, is conveyed, in the usual manner, to the desired point.

I am aware that a float for carbureters having a flexibly-jointed air-induction pipe, that allows it to rise and fall when the containing-chamber is perfectly level, is old; but by the use of my swiveled connecting-pipe D, the float will always follow the surface of the liquid independent of the position of the tank.

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

An induction-float for carbureters, consisting of the perforated disk B and float C, united to the induction-pipe A by the hinged connections *b* and *e*, and the swivel-jointed pipe D, whereby the float will always adjust itself to the surface of the liquid independent of the position of the containing-tank, substantially as and for the purpose specified.

Witness my hand this 12th day of March, A. D. 1877.

JOHN CLINGMAN.

Witnesses:

CHAS. M. PECK,

PATRICK H. GUNCKEL.