J. H. BEAN.

Carbureters for Gas and Air.

No. 157,781. Patented Dec. 15, 1874.

Fig 1.

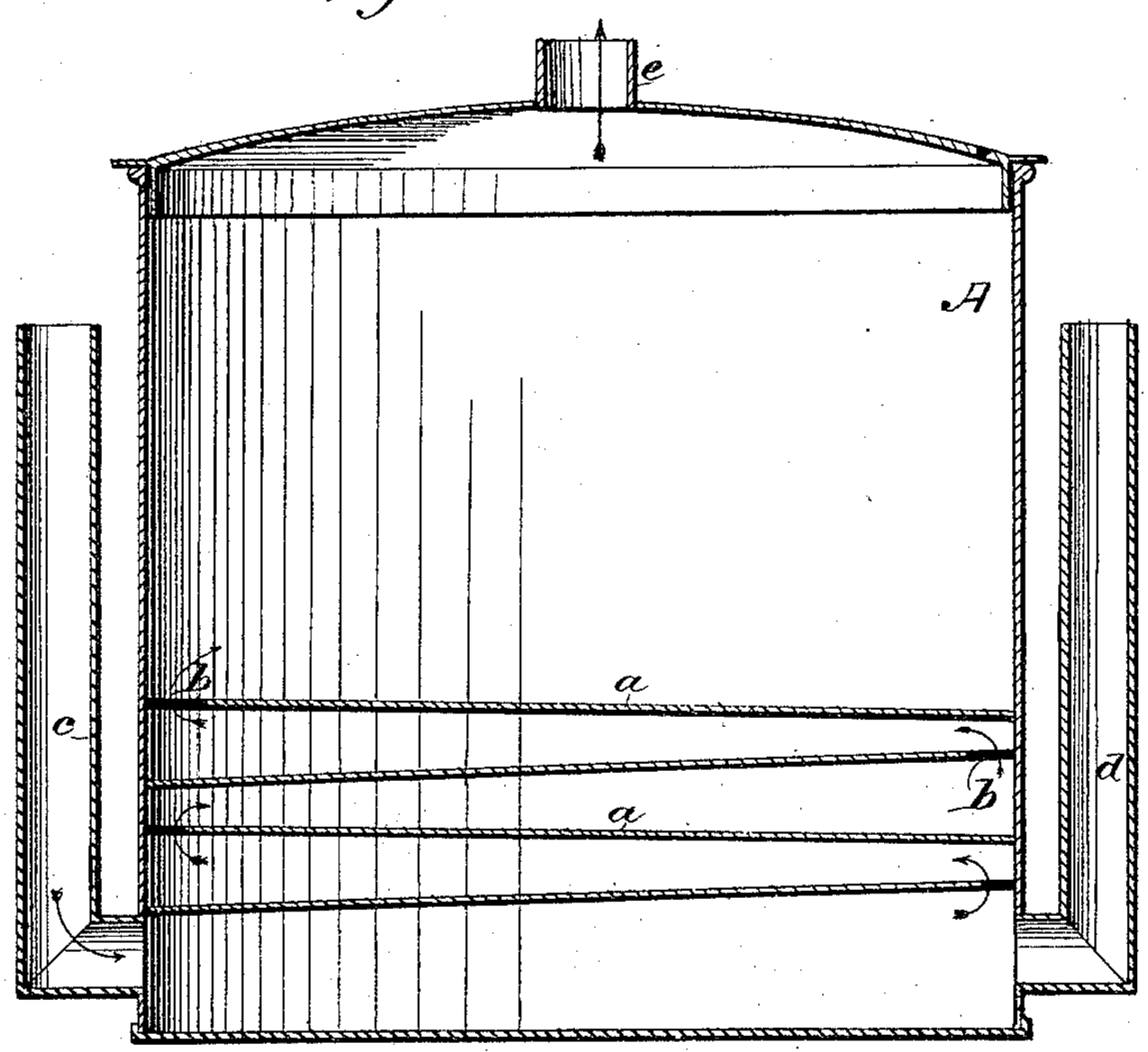
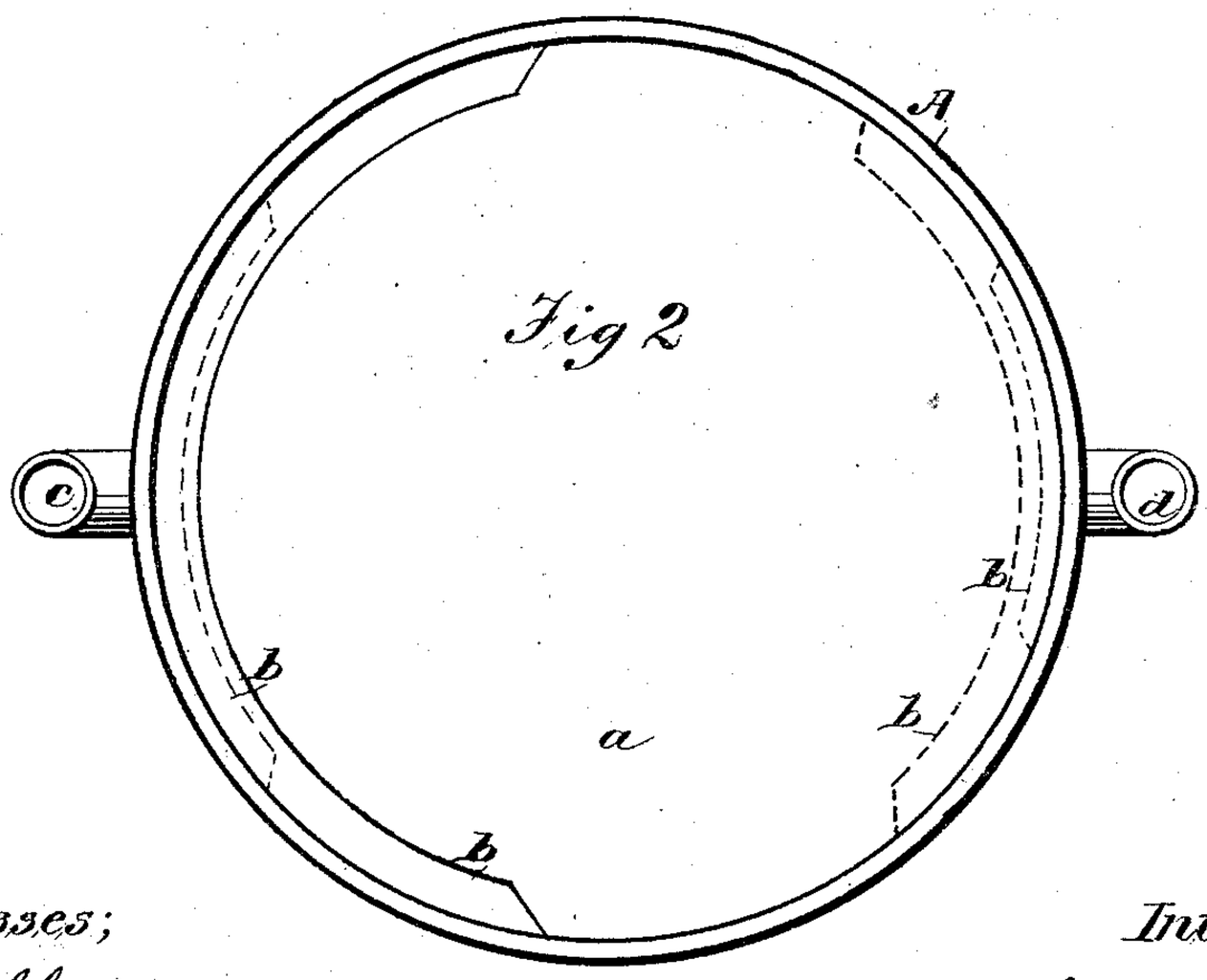


Fig 2



Witnesses;
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UNITED STATES PATENT OFFICE.

JOSEPH H. BEAN, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND BENJAMIN DAWSON, OF SAME PLACE.

IMPROVEMENT IN CARBURETERS FOR GAS AND AIR.

Specification forming part of Letters Patent No. **157,781**, dated December 15, 1874; application filed July 9, 1874.

To all whom it may concern:

Be it known that I, JOSEPH H. BEAN, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Carbureters; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention consists in providing a carbureter, having separating-diaphragms in the gasoline-chamber, with communicating openings of gradually-increasing area from the entrance to the discharge, the object being to provide for the expansion of the air as it becomes carbureted, and thus facilitate its movement and materially reduce the pressure.

In the drawings, Figure 1 represents a central sectional elevation of my improved carbureter, and Fig. 2 a plan view with the cover removed.

To enable others skilled in the art to make and use my invention, I will now proceed to fully describe its construction and manner of operation.

A represents a case of suitable material, preferably cylindrical in form, which is provided with the separating diaphragms or shelves *a a*, properly inclined, as shown, to permit the air to ascend in its movement through the gasoline. *b b* represent a series of communicating openings in the diaphragms, arranged alternately upon opposite sides, as shown, which gradually increase in area from the entrance to the discharge. These openings are not preferably of a circular form, but consist of an elongated circumferential slot upon the side opposite to the opening in the diaphragm below. *c* represents the pipe for introducing the air; *d*, the pipe for introducing the gasoline, and *e* the pipe for conducting away the gas.

The operation is as follows: Air being forced through the pipe *c* into the gasoline-chamber, which is supplied with the gasoline through pipe *d*, the same passes, in its movement, through its various divisions between the diaphragms, and out finally, in the form of gas, through the pipe *e*. By means of the series of openings of gradually-increasing area, the air, as it expands in volume in consequence of its becoming more and more perfectly carbureted, is permitted to pass readily, without increasing the pressure in the chamber.

The result thus obtained is important, because an increased pressure in the chamber interferes with the free movement of the air, unfavorably affects its power of absorption, and increases the cost of the machine.

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

In a carbureter having separating-diaphragms, the series of communicating openings of gradually-increasing area, substantially as described.

This specification signed and witnessed this 8th day of July, 1874.

J. H. BEAN.

Witnesses:
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