

L. STEVENS.

Apparatus for Carbureting Air.

No. 58,559.

Patented Oct. 2, 1866.

Fig: 1.

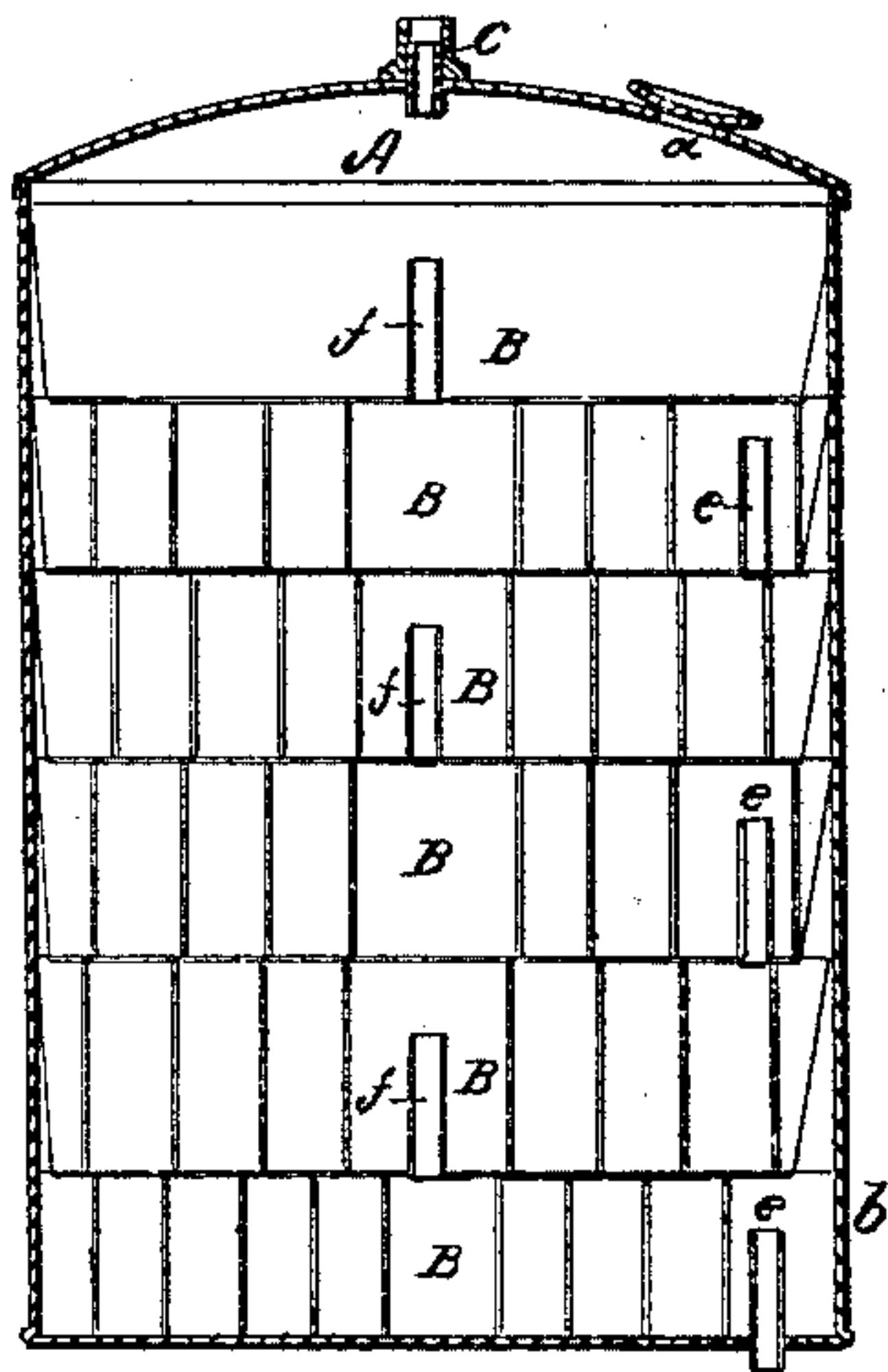


Fig: 2.

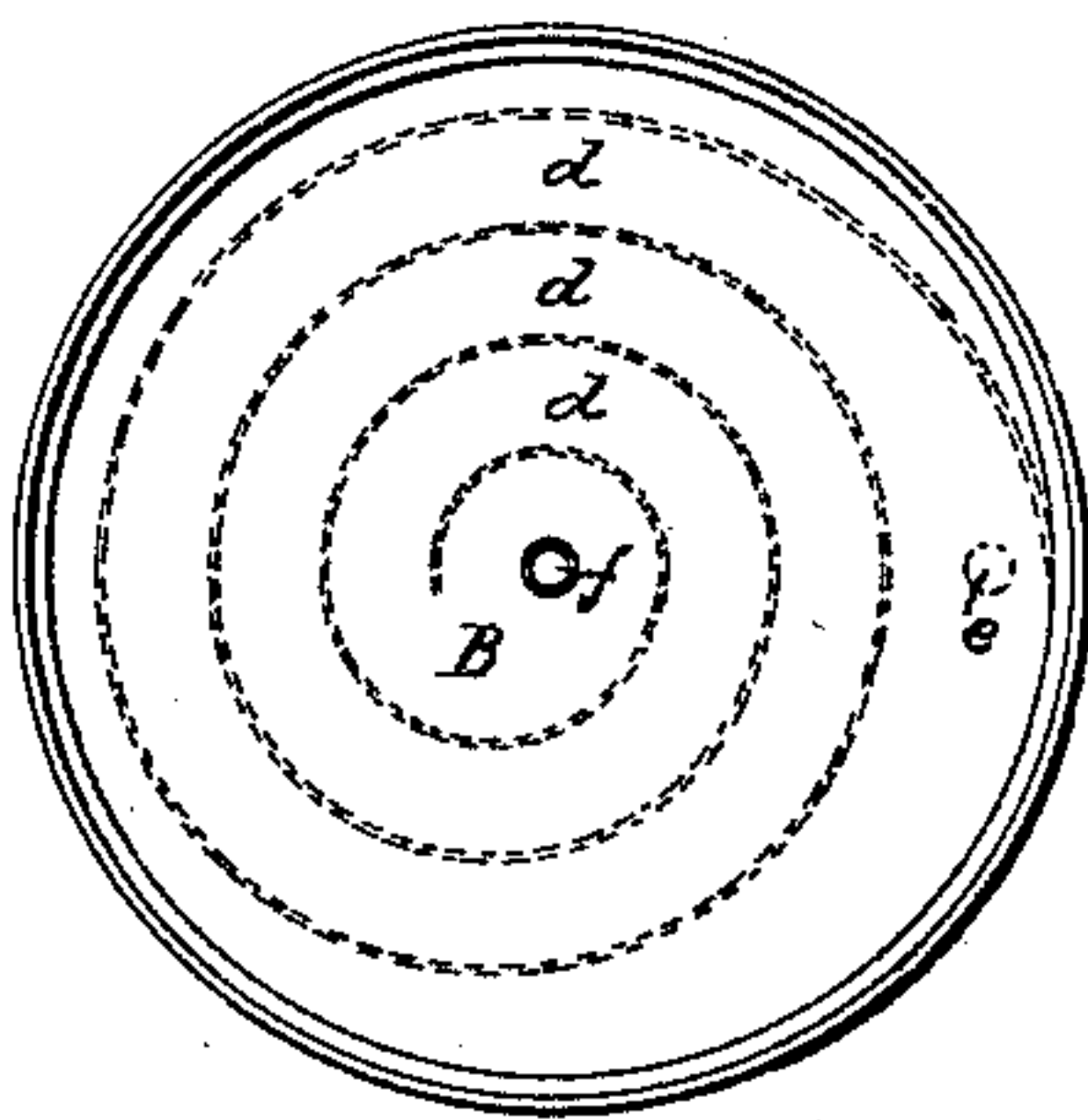
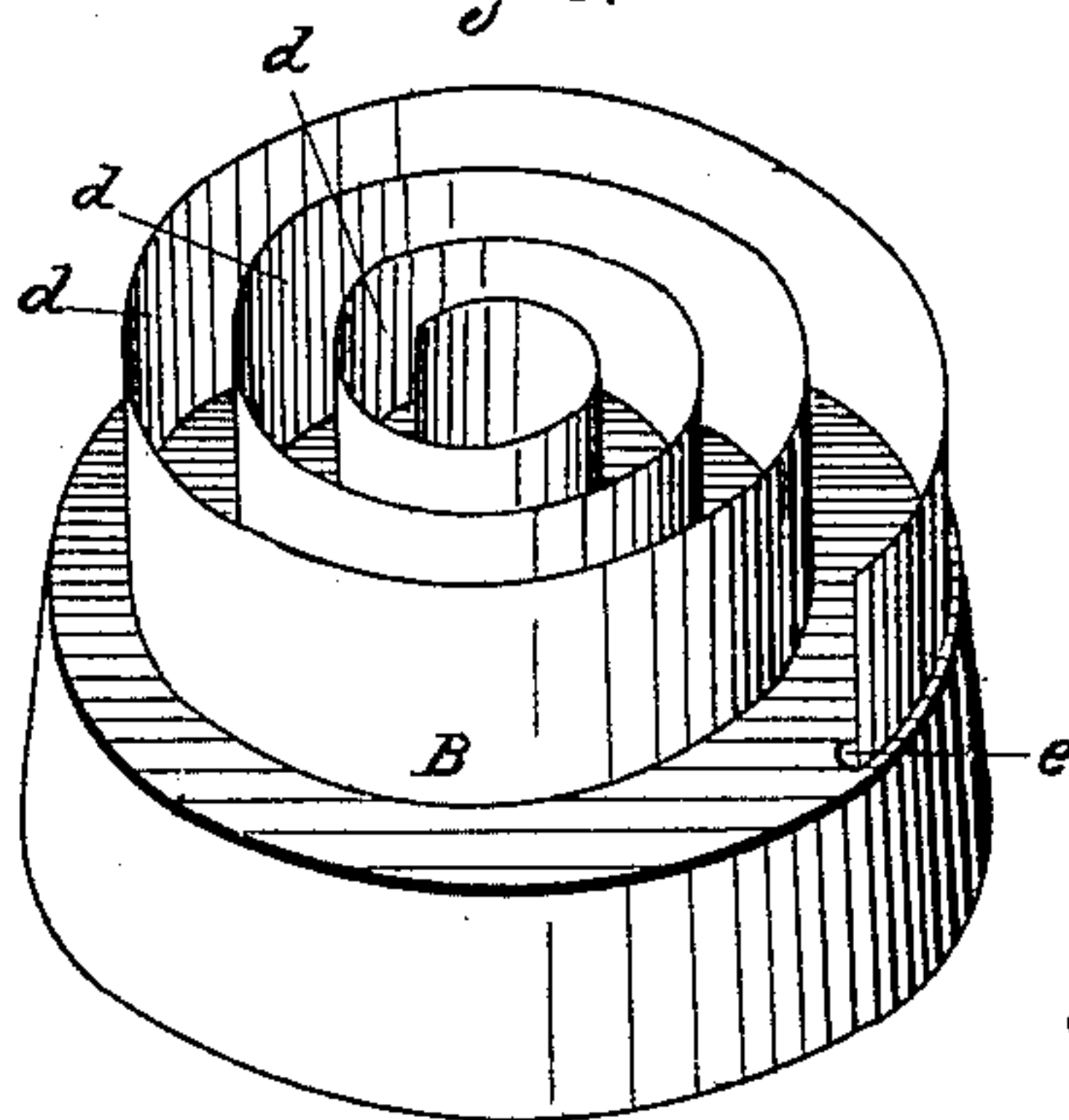


Fig: 3.



Witnesses:

A. J. Badger.
C. Edgar Smith.

Inventor:

Levi Stevens.

UNITED STATES PATENT OFFICE.

LEVI STEVENS, OF FITCHBURG, ASSIGNOR TO HIMSELF AND NORMAN C. MUNSON, OF SHIRLEY, MASSACHUSETTS.

IMPROVED APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. 58,559, dated October 2, 1866.

To all whom it may concern:

Be it known that I, LEVI STEVENS, of Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and Improved Apparatus for Carbureting Atmospheric Air or vaporizing a volatile hydrocarbon and mixing atmospheric air therewith for the purpose of producing an inflammable gas; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a vertical sectional view of the cylinder A, with the devices contained therein, and used in combination therewith, for the purposes mentioned.

The cylinder A may be made of brass, tin, or other suitable material, and in the cylinder the process of carbureting the air is performed. *a* is an opening, through which the hydrocarbon is introduced into the cylinder A. *b* represents the opening through which air is forced into the cylinder A by a gas-meter wheel, such as is commonly used, or by any other suitable means. *c* represents the aperture or orifice through which the carbureted air or gas passes to the delivery-pipe. B B are cups or disseminators, with tortuous passages on the inner or lower side of each. These passages are formed by soldering a strip of tin, brass, or other metal upon the edge, and in the form of a spiral or an involute, to the under side of the bottom of each cup or disseminator B B. In each case the edge of the tin wall or partition rests upon the bottom of the tin cup or disseminator next beneath, and the lower one rests upon the bottom of the cylinder.

Fig. 2 is a view or plan of the lower side of a cup or disseminator, B, of which five similar ones, B B, are represented in Fig. 1.

The space between the curved line *d* represents a tortuous passage, along which air, received through the tube or opening *b*, is forced, while the passage is filled, in whole or in part, with hydrocarbon, until the air passes through the opening or tube *f* to the cup or chamber above, where the air is introduced to the central point of a similar tortuous passage, from which it is forced outward until it escapes to the chamber or cup next above through an opening or tube, *e*, and thus the air is forced alternately through tortuous passages toward

the center, and from the center, through similar passages, to the outside, until it is sufficiently carbureted for use, when it is permitted to pass to the delivery-pipe.

The tortuous passages may be filled, in whole or in part, with shavings of rattan or with any other fibrous substance, through the interstices of which the hydrocarbon and the air may pass.

Fig. 3 is an isometrical view of such a cup or disseminator as is shown in Fig. 2, exhibiting the tortuous passage in perspective.

The cylinder A is at the same time a tank for receiving and holding the hydrocarbon and a generator or evaporator for receiving and holding the atmospheric air while the process of carbureting takes place.

The hydrocarbon introduced through the orifice *a* falls upon the first cup B, and rises to the top of the tube *f*, through which it runs to the cup next below, in which it rises to the top of the tube *e*, through which it runs to the cup next below, and so on to the bottom of the cylinder. When it reaches the bottom it rises to the top of the tube *n*, which should be left open during the process of introducing hydrocarbon into the cylinder. When the hydrocarbon rises so high as to run out of the tube *n* no more should be introduced.

I use a common gas-meter wheel for the purpose of forcing air into the cylinder through the opening *b*, but I do not claim the method of supplying air. The wheel and the method of using it in combination with gas-machines are described in the patent granted to Charles Cunningham, March 13, 1855.

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

1. The cups or disseminators B B, constructed and operating substantially as described.
2. The combination of one or more cups or disseminators B B with the cylinder A, for the purposes described.
3. The arrangement of two or more cups or disseminators with each other, substantially as described.

LEVI STEVENS.

In presence of—

C. EDGAR SMITH,
A. F. BADGER.