

J. H. VAN HOUTEN.

Carbureter.

No. 109 562.

Patented Nov. 22, 1870.

Fig. 3.

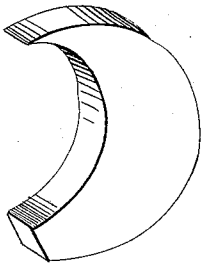


Fig. 2.

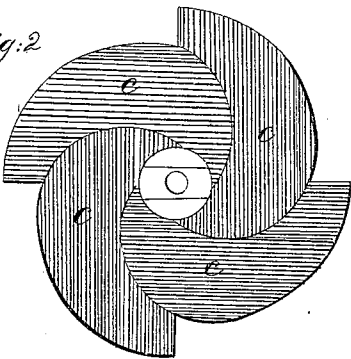


Fig. 4.

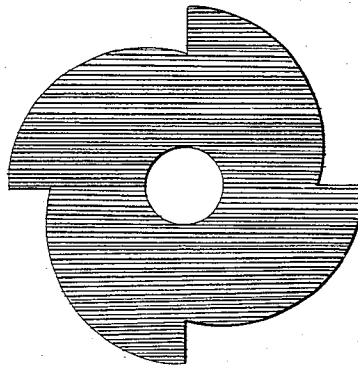
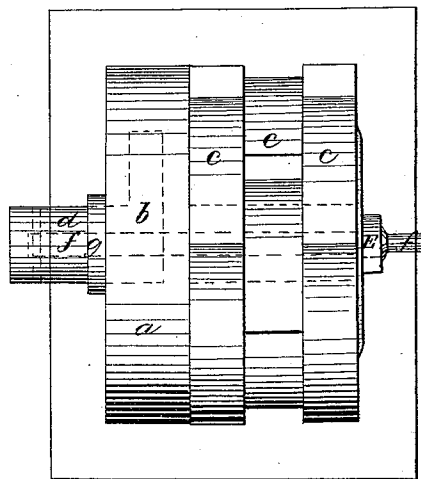


Fig. 1.



Oliver Drake
Abraham Manners

James H. Van Houten

UNITED STATES PATENT OFFICE.

JAMES H. VAN HOUTEN, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. **109,562**, dated November 22, 1870.

To all whom it may concern:

Be it known that I, JAMES H. VAN HOUTEN, of the city of Newark, county of Essex, and State of New Jersey, have invented certain Improvements in Carbonizing-Wheels; 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 front view of the wheel entire. Fig. 2 is a sectional view, showing the flues as combined in a section. Fig. 3 is a perspective view of a single flue. Fig. 4 represents the lining or packing, which is placed between the sections.

a is the air-drum. *b* is the air-chamber. *c* are the sections or flues. *d* is the air-tube. *e* is the nut which is screwed upon the shaft and fastens the sections together. *f* is the shaft which is fastened to the drum in the center, and when the sections are adjusted and screwed up by means of the nut *e* the whole wheel becomes rigid and revolves with the shaft.

By making the flues separately, as shown in Fig. 3, I am enabled to make a more perfect wheel than by any other method, and at about half the expense, and its operation is more simple and at the same time more perfect.

The air-drum *a* may be made of sheet metal of any required dimensions, in which is placed the air-chamber *b*, with a tube, *d*, projecting through the outside of the drum *a*, as shown in Fig. 1. Through this air-tube is placed a sleeve for the reception of the shaft *f*. On the outside of the drum is soldered a flange or

washer, *g*, for the purpose of stiffening the drum-head, and also to give a better bearing for the air-tube, as upon it the drum revolves.

The sections *c* are made in single flues, as shown in Fig. 3, of sheet metal, so that when completed and soldered together they form a circle corresponding in size to the drum, as shown in Fig. 2. Between each section is placed a lining of felt, or cloth, or white lead, or any other substance for the purpose of making them air-tight.

The wheel may contain as many sections as is required, which depends upon the number of lights to be supplied. The first section may be soldered to the drum. The last section may be soldered to the plate, on the outside of which is soldered a flange or washer, against which the nut *e* screws, which holds whole wheel in position.

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

1. A carbonizing-wheel with its flues formed in sections and connected together by means of a shaft, substantially in the manner herein shown and specified.

2. The carbonizing-wheel herein shown and described, consisting of the air-drum *a*, air-chamber *b*, flues *c*, formed in sections and having a common axis, and the air-tube *d*, when the same are combined and connected together, and operate substantially as described.

JAMES H. VAN HOUTEN.

Witnesses:

ABRAHAM MANNERS,
OLIVER DRAKE.