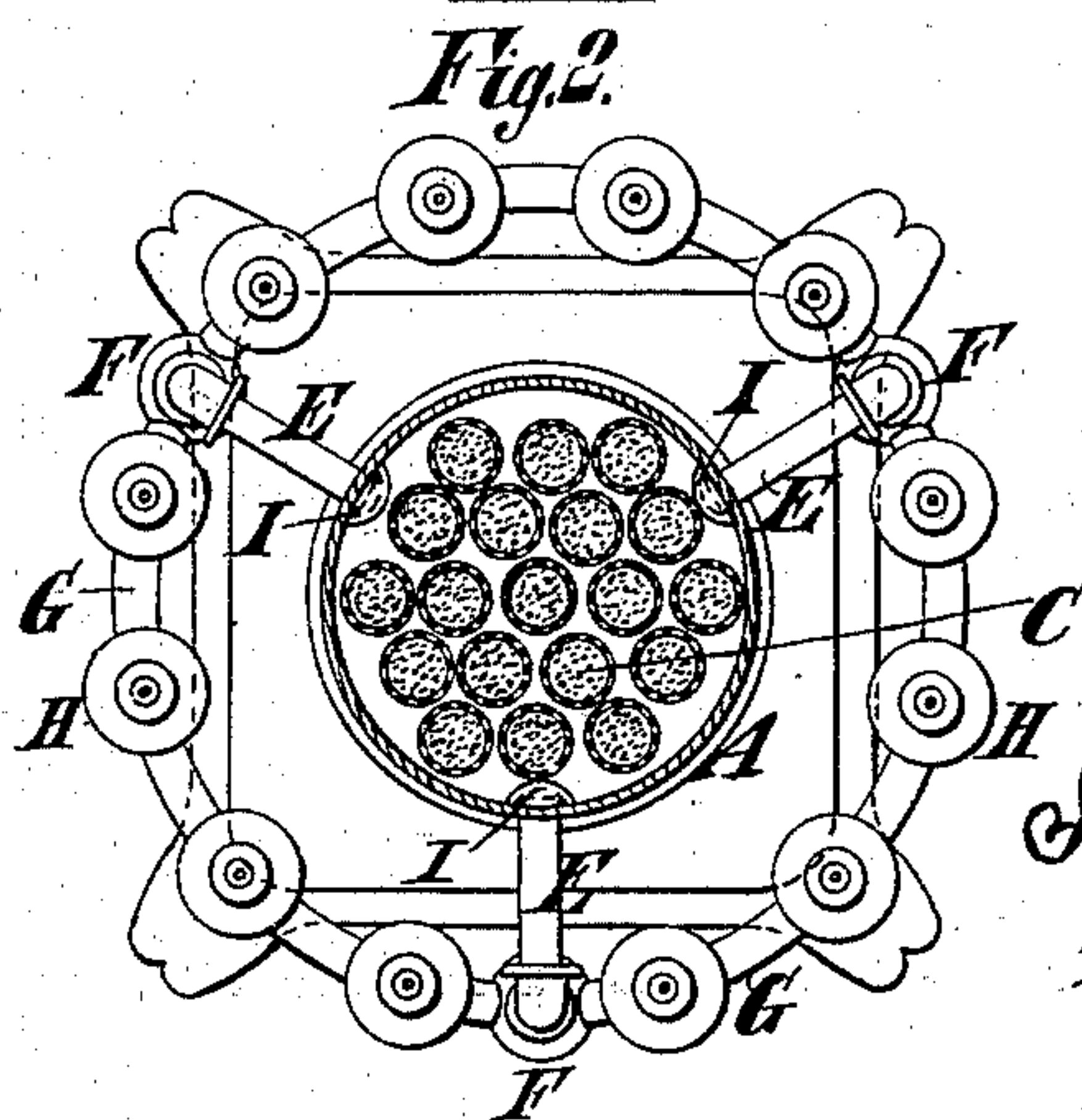
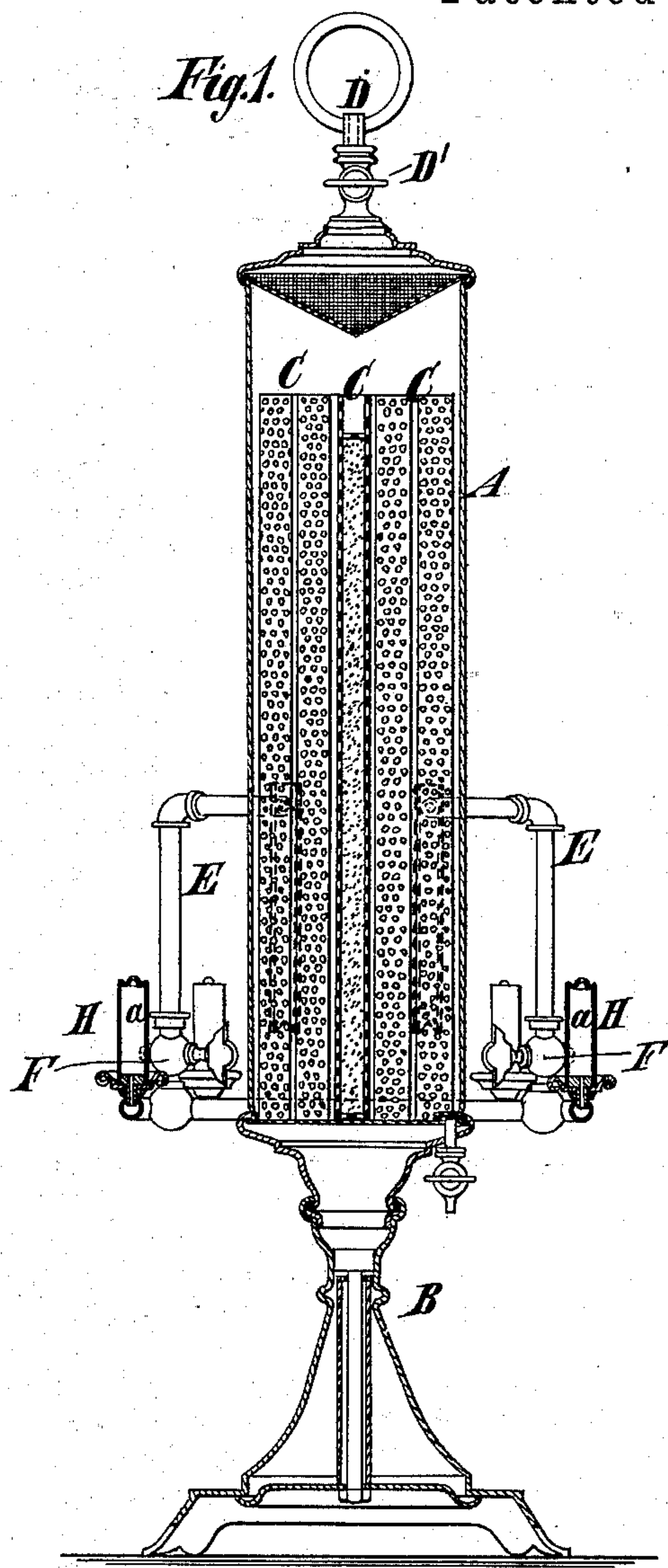


(No Model.)

I. W. SHALER.  
CARBURETOR.

No. 278,281.

Patented May 22, 1883.



Witnesses:

James R. Bowen.  
Alfred L. Brown

Inventor:

Ira W. Shaler  
by his attorney,  
Edwin H. Brown



# UNITED STATES PATENT OFFICE.

IRA W. SHALER, OF BROOKLYN, N. Y., ASSIGNOR OF ONE-HALF TO H. C. COVERT, OF NEW YORK.

## CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 278,231, dated May 22, 1883.

Application filed November 3, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, IRA W. SHALER, of Brooklyn, in Kings county, and the State of New York, have invented a certain new and useful Improvement in Carburetors, of which the following is a specification.

This improvement consists in the combination, with a carburetor, of a packing consisting of wool-flock.

The improvement also consists in the combination, with the chamber of a carburetor, through which air may circulate automatically by reason of the specific gravity it acquires after becoming carbureted, and which is provided with an air-inlet at the top and an air-outlet at some distance below the top, of a packing consisting of a number of upright cylinders open at their upper ends and perforated throughout their length, and flock or analogous material loosely packed in said cylinders, whereby passages through which the air may freely pass are maintained.

The improvement also consists in the combination, with the chamber of a carburetor provided with an air-inlet at or near the top and an outlet pipe or pipes at a considerable distance below the top, of a packing consisting of a number of upright cylinders open at their upper ends and perforated throughout their length, and flock or analogous material loosely packed in said cylinders, and a duct or ducts leading from said outlet pipe or pipes to the lower part of the chamber.

The improvement also consists in the combination, with a carburetor, of a novel arrangement of the outlet-pipes and burners, hereinafter particularly described and claimed.

In the accompanying drawings, Figure 1 is a vertical section of a carburetor embodying my improvements, and Fig. 2 is a horizontal section of the same.

Similar letters of reference designate corresponding parts in both figures.

A designates the carbureting-chamber. As shown, it is mounted on a pedestal or base-piece, B, so that it may be stood upon a table or other support. It may be made of sheet metal, as usual. It contains a packing consisting of wool-flock placed in perforated cylinders C, which preferably will be made of sheet metal. These cylinders are arranged side by

side in vertical positions, free spaces for the passage of air being left between them, as may be seen in Fig. 2. I have discovered that wool-flock, which is the refuse left in carding wool, or resulting from shearing woolen cloth, possesses remarkably valuable attributes for a carburetor-packing, in that it has great capillarity and will not become clogged by use as soon as the materials ordinarily used as carburetor-packings.

D designates the air-inlet pipe. It communicates with the top of the carbureting-chamber A, and is provided with a cock, D', whereby the passage of air through it can be controlled. As a means of safety, an inverted cone of perforated sheet metal or wire-gauze is inserted in the chamber A below the inlet-pipe D.

E designates outlet-pipes for the carbureted air. As shown, they are three in number. They extend from the carbureting-chamber at a point considerably above its bottom to a pipe, G, which surrounds the lower part of the said chamber, and is provided with burners H. As here shown, the annular pipe G is composed of three sections, united by couplings to which the pipes E are connected. Each coupling is in communication with one section, and closes the end of the adjacent section. Each pipe E is provided with a cock, F. By opening or closing the cock F of any pipe E the carbureted air may be admitted to or shut off from the section of the pipe G with which such pipe E communicates.

It is advantageous to connect the outlet-pipes E with the carbureting-chamber above its bottom, because then hydrocarbon liquid which may collect on the bottom cannot pass out through the outlet-pipes. I preferably provide the interior of the chamber A with ducts I, which communicate with the ends of the outlet-pipes and lead nearly to the bottom of the chamber. These ducts are open at the bottom. By this means the air cannot enter the outlet-pipes until after it has passed nearly to the bottom of the carbureting-chamber. The lower ends of these ducts I are provided with wire-gauze or perforated metal, for the sake of securing the greatest possible safety.

The burners H may be made of sheet metal, and are provided with chambers a, which are



considerably larger than the passages through which the carbureted air is emitted. The carbureted air is therefore rarefied by the heat imparted to it during its passage through the  
5 burners.

I do not seek to cover, broadly, wool-fiber as an absorbent or packing material for a carburetor, and only claim such material when in the form of flock. In this form it is homogeneous, and yet will not become readily clogged,  
10 as will other material.

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

1. The combination, with a carburetor, of a  
15 packing consisting of wool-flock, substantially as specified.

2. The combination, with the chamber of a carburetor, through which air may circulate automatically by reason of the specific gravity  
20 it acquires after becoming carbureted, and which is provided with an air-inlet at the top and an air-outlet at some distance below the top, of a packing consisting of a number of upright cylinders open at their upper ends and  
25 perforated throughout their length, and flock or analogous material loosely packed in said

cylinders, whereby passages through which the air may freely pass are maintained, substantially as specified.

3. The combination, with the chamber of a  
30 carburetor, provided with an air-inlet at or near the top and an outlet pipe or pipes at a considerable distance below the top, of a packing consisting of a number of upright cylinders open at their upper ends and perforated  
35 throughout their length, and flock or analogous material loosely packed in said cylinders, and a duct or ducts leading from said outlet pipe or pipes to the lower part of the chamber, substantially as specified.

4. The combination, with a carburetor, of  
40 the annular pipe G, surrounding the same, and provided with the burners H, pipes E, leading from the carburetor to said annular pipe at about equidistant points, and cocks F, where-  
45 by the carbureted air may be admitted to the whole or a part of the annular pipe at pleasure, substantially as specified.

IRA W. SHALER.

Witnesses:

T. J. KEANE,

JAMES R. BOWEN.