

(No Model.)

2 Sheets—Sheet 1.

J. CLINGMAN.
CARBURETOR.

No. 543,611.

Patented July 30, 1895.

Fig 1.

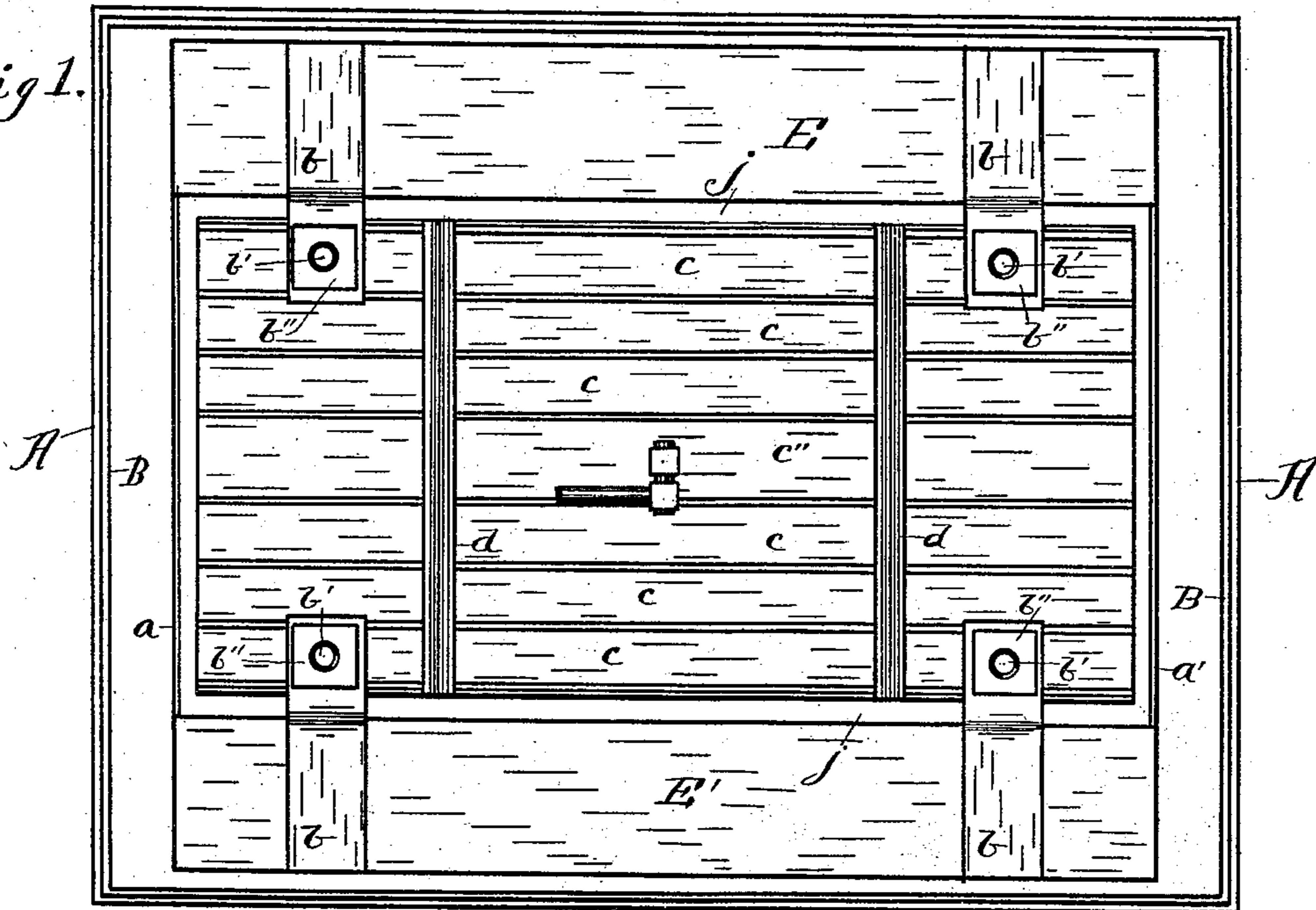
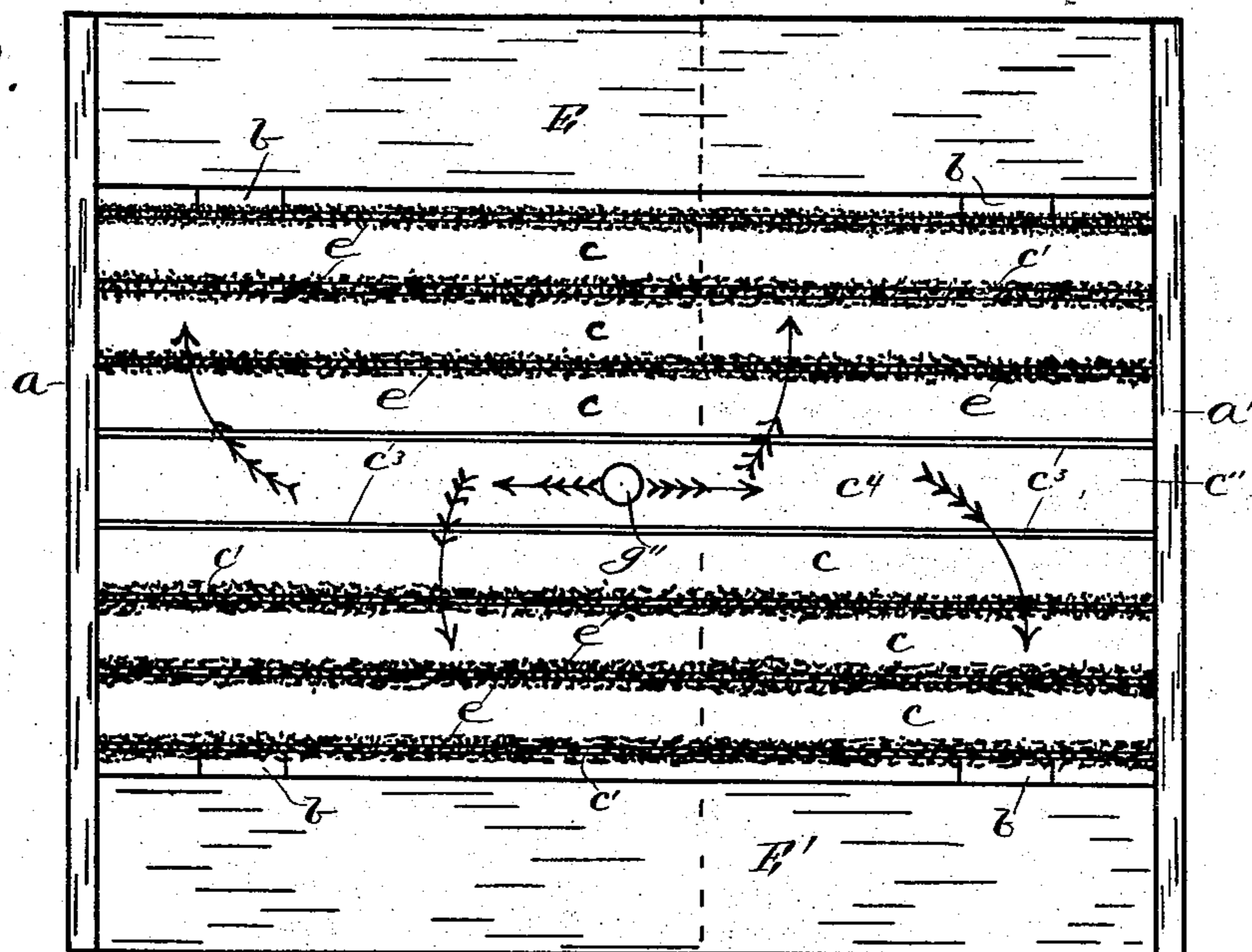


Fig 2.



WITNESSES:

Lester L. Allen.
W. H. Smith.

INVENTOR

John Clingman.

BY

R. J. McCarty.
ATTORNEY.

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2 Sheets—Sheet 2.

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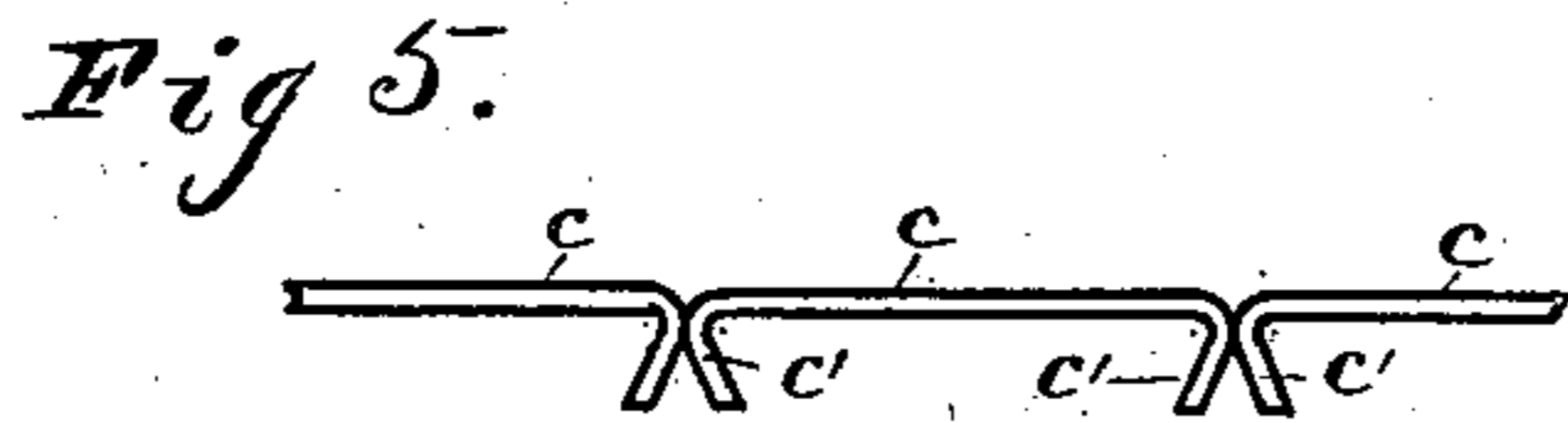
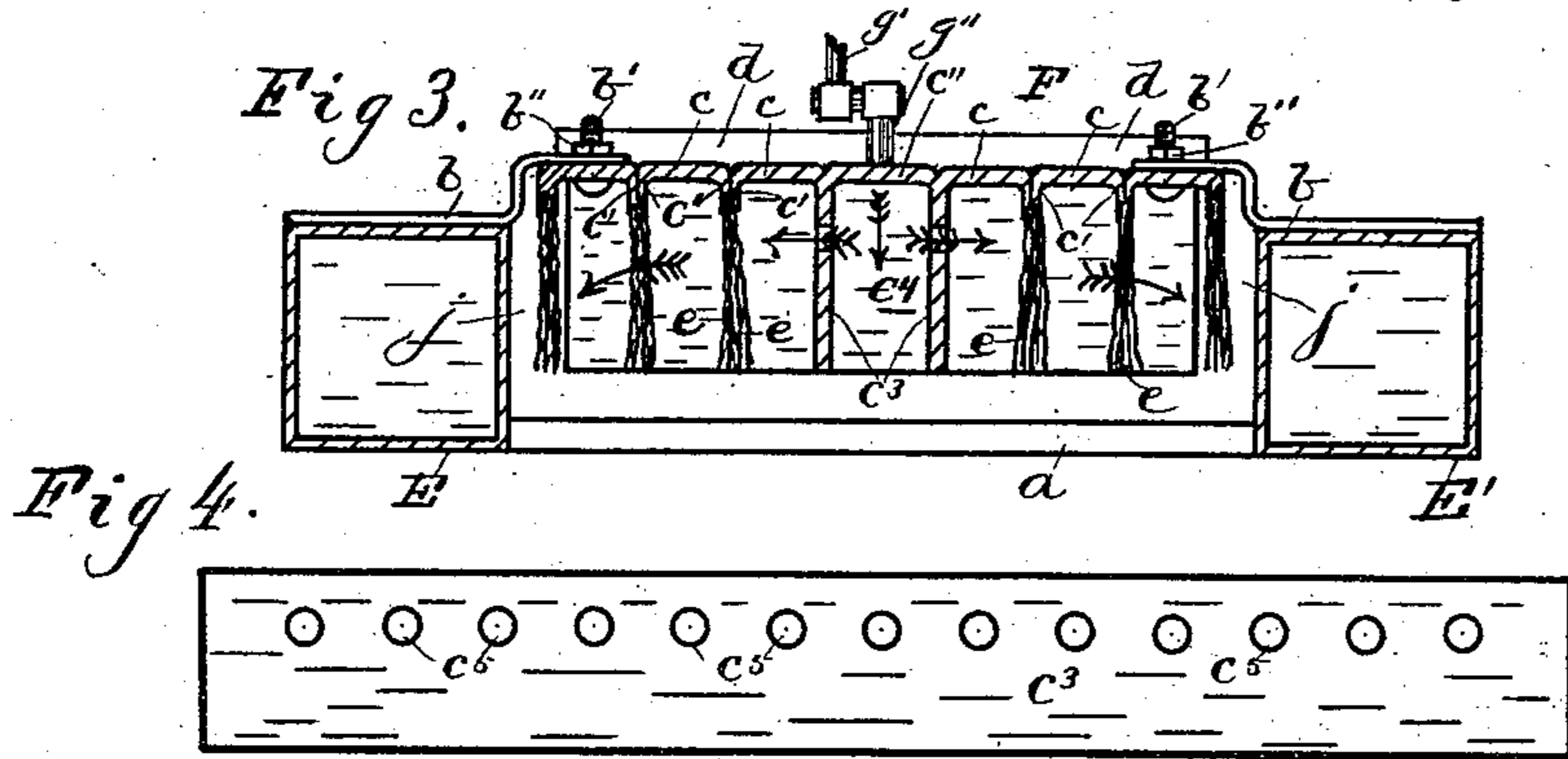


Fig 6.

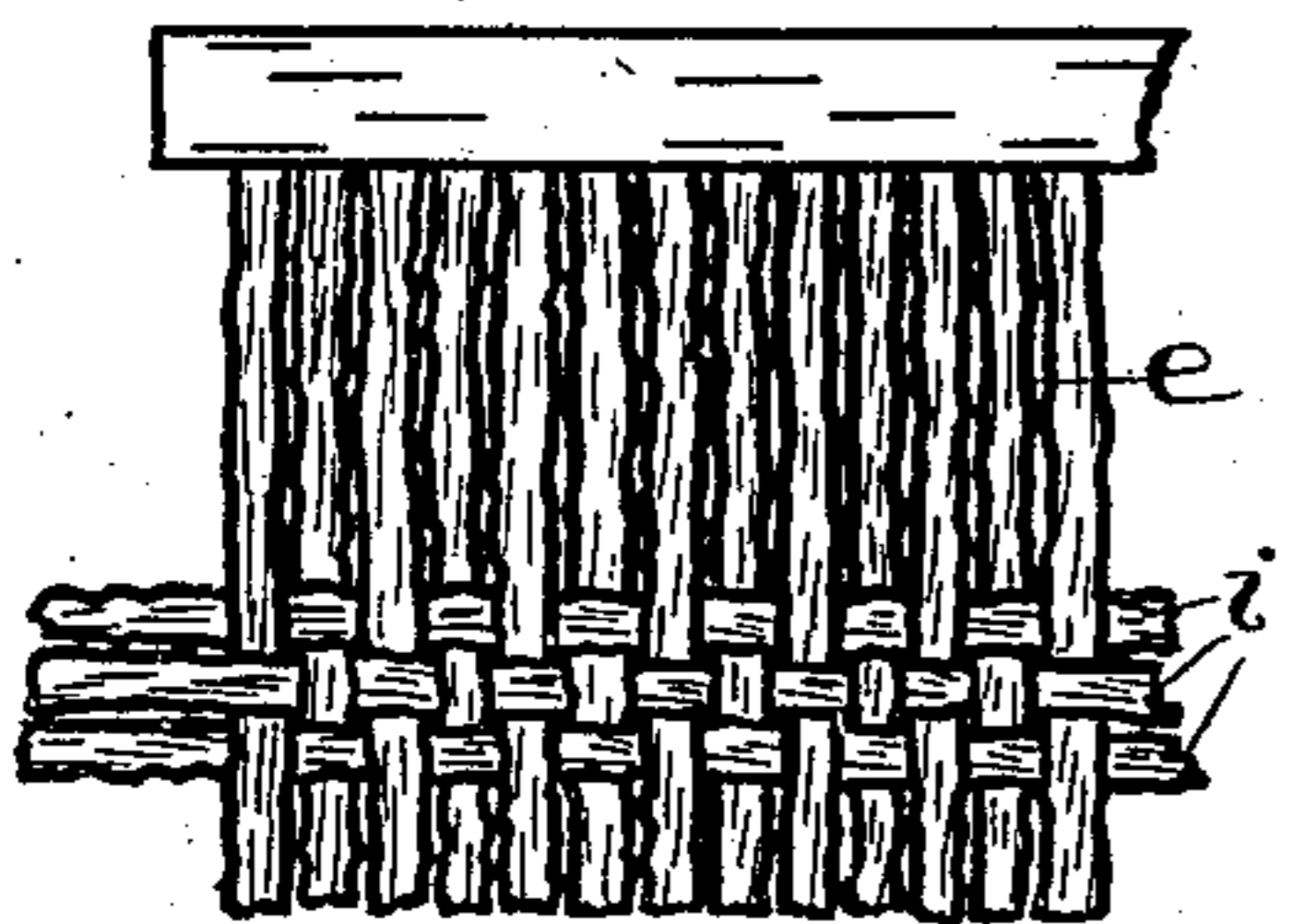
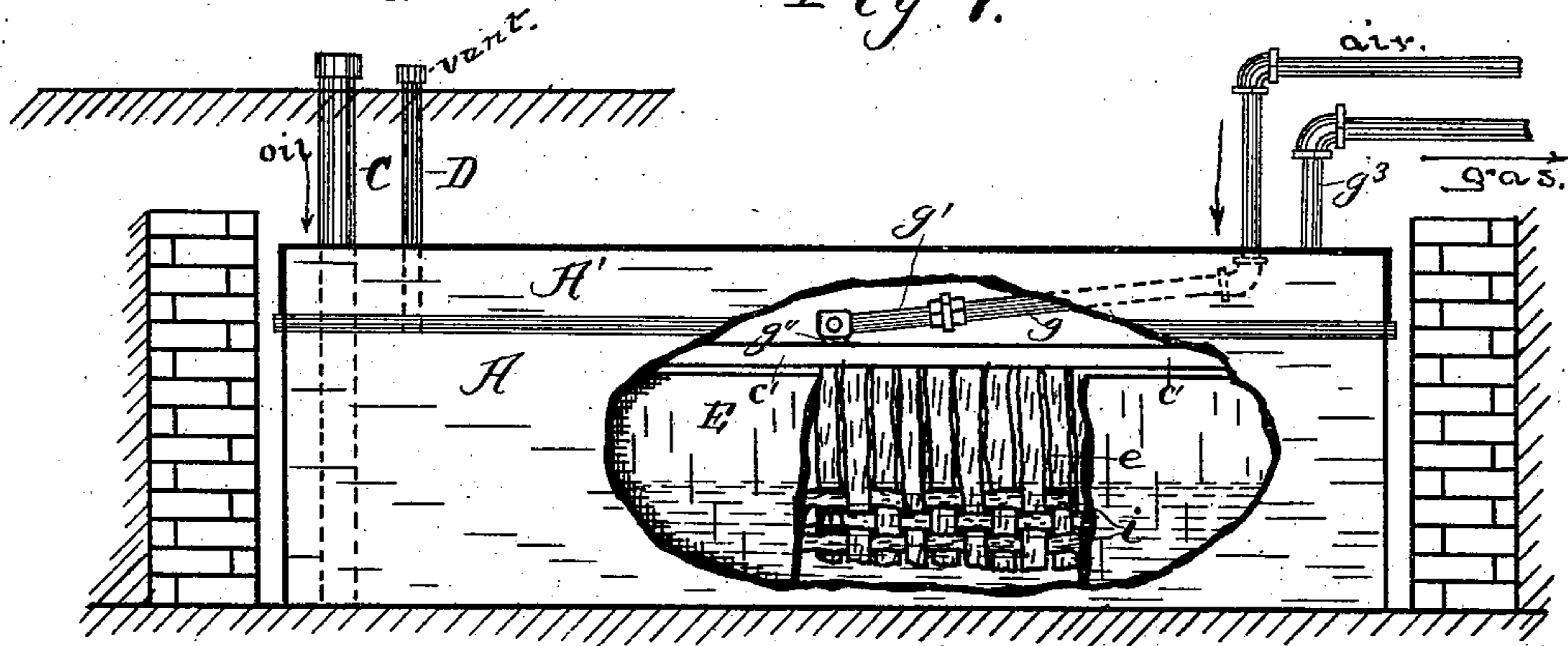


Fig 7.



WITNESSES:

Lester L. Allen.
W. H. Smith.

INVENTOR

John Clingman.

BY

R. J. McCarty.
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN CLINGMAN, OF DAYTON, OHIO.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 543,611, dated July 30, 1895.

Application filed March 28, 1895. Serial No. 543,444. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLINGMAN, of Dayton, county of Montgomery, State of Ohio, have invented a new and useful Improvement in Carburetors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in carburetors.

The improvements have reference more particularly to the generator or float through which atmospheric air is introduced to the vapor arising from gasoline or other hydrocarbon fluid.

The object of the invention is to provide a carburetor in which the air that enters is thoroughly carbureted and a brilliant and steady light, free from smoke and odor, is obtainable.

To this end the invention consists of means that will be fully described in the specification and set out in the claims.

Referring to the annexed drawings, Figure 1 is a top plan view of a carburetor made in accordance with my invention. Fig. 2 is a bottom plan view of the float removed from the tank shown in Fig. 1. Fig. 3 is a section of the floats and generator on the line xx of Fig. 2. Fig. 4 is a longitudinal side elevation of one of the perforated strips through which the air is disseminated. Fig. 5 is an end view of a portion of the top of the generator. Fig. 6 is an enlarged detached view of a portion of the fabric through and in which the air is carbureted. Fig. 7 is a longitudinal elevation of the carburetor. Parts of the tank and float are broken away to obtain a view of the fibrous substance or fabric.

In the detailed description similar letters of reference indicate corresponding parts in the several views.

A designates a metallic case, preferably constructed of sheet metal and of rectangular form. On the interior of this case, for the purpose of strengthening or reinforcing the metal, I place a wooden lining or box B, which conforms to the shape of the case and

is an efficient means for preventing the metal from warping under the influence of water or dampness. When thus united the parts A and B constitute a tank or vessel adapted to contain the hydrocarbon fluid.

The tank is inclosed by a cover A', through which a feed-pipe C projects, said pipe C having a connection with a reservoir from whence the supply of hydrocarbon fluid is obtained. D designates a vent-pipe that also projects into the tank.

E and E' are two parallel floats joined at their respective ends by thin transverse metallic strips a and a' . The generator F is mounted on these floats by means of angular plates b that are rigidly attached to said floats, and there is an intervening space j on each side between the floats and the generator. The plates b have holes to receive screw-threaded bolts b' that project from the top of the generator. b'' designate nuts that inclose said bolts and enable a vertical adjustment of said generator. The construction of this part of the carburetor being an important feature of the invention I will minutely describe the same.

Referring to Figs. 1 and 3, the top of the generator is shown to be constructed of a series of strips c , preferably of sheet metal, arranged longitudinally side by side and having two or more transverse brace-ribs d on their upper side, soldered or otherwise rigidly attached thereto. These strips c are likewise soldered or otherwise rigidly attached to each other throughout their length and have their longitudinal edges turned downwardly, as at c' , for a purpose presently described.

The central strip c'' has its longitudinal edges turned downwardly to form partitions c^3 , between which a longitudinal air-chamber c^4 is formed. These partitions each serve to deflect the air uniformly throughout said chamber, and are each provided with a series of perforations c^5 , as is shown in Fig. 4. The air that is introduced to this chamber, by means presently described, passes in uniform quantities through said perforations throughout the entire length of the carburetor and becomes thoroughly carbureted.

e designates a series of strips of fibrous substance cut from a woven fabric—such, for example, as the textile known as "burlap" or

"jute." This form of texture is greatly preferred over one having finer threads and more closely woven and is also preferable to wicking. The former offers too great a resistance to a free and uniform circulation of air, while the latter—to wit, the wicking—has a tendency to separate and thereby permit an irregular or too free passage of air. As shown in Figs. 6 and 7, the horizontal threads *i* are drawn from the upper portion of each strip, leaving those near the lower edge in their place to maintain the vertical threads in a proper position and prevent their separation. The atmospheric air is introduced into the center of the air-chamber by an air-pump or any suitable mechanism through an air-pipe *g*, which is connected by means of a union to a section of pipe *g'*. This latter pipe has a hinge-joint connection with a tube or pipe *g''* that projects into the air-chamber *c*⁴. The cover *A'* is provided with a normally-closed opening in its center, through which the hand may be passed to adjust the position of the generator *F* on the floats by means of the nuts hereinbefore referred to. After the carburetor is placed in the ground, as shown in Fig. 7, and the pipes connected, a sufficient quantity of hydrocarbon fluid is to be fed to the tank to float the generator and submerge the strips of fibrous substance to a point above the horizontal threads *i*, as shown in Fig. 7. The carbureting fluid is uniformly attracted by these fibrous strips and the air being fed thereto throughout the length of the air-chamber rapidly becomes carbureted. The sides of the generator between floats being open, as at *j*, there is no obstruction to the free passage of carbureted air on both sides of the carburetor.

*g*³ is the pipe through which the gas is fed. Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a carburetor, the combination of two parallel floats, a generator removably mounted on said floats said generator consisting of parallel strips having their longitudinal edges turned downwardly, a series of strips of woven fiber secured between said downwardly projecting edges, said woven fiber having a portion of its lower horizontal threads re-

tained, whereby means are provided for maintaining the vertical threads in position, substantially as herein shown and described.

2. In a carburetor, the combination with a metallic case having its interior lined with wood, of parallel floats connected at their ends by transverse strips, a generator removably mounted on said floats, a longitudinal air chamber in the center of said generator and a series of perforations throughout the walls of said chamber, strips of woven fiber depended from the top of the generator on both sides of said walls and parallel therewith, said woven fiber having a portion of the horizontal threads retained, whereby means are provided for maintaining the vertical threads therein in place, substantially as herein described.

3. A generator for carburetors, consisting of a series of parallel strips (*c*) rigidly attached to each other and having their longitudinal edges (*c'*) projecting downwardly, a central strip (*c''*) forming partitions (*c*³) with perforations or airports therein, an air chamber between and extending the length of said partitions, a series of parallel strips of woven fiber as described depended from the edges (*c'*) substantially as herein shown and described.

4. The combination of parallel floats *E* and *E'* connected by strips (*a*) and (*a'*), generator *F* removably mounted on said floats with intervening spaces between said floats and generator, longitudinal partitions, (*c*³) in the center of said generator provided with a series of perforations and forming an air chamber (*c*⁴), a series of strips of woven fiber running parallel with said chamber, the horizontal threads being drawn from a portion of each of said strips of woven fiber, as described, whereby means are provided for enabling the air to uniformly pass through said fiber, and for maintaining the vertical threads thereof in a uniform position, substantially as described.

In testimony whereof I have hereunto set my hand this 25th day of March, 1895.

JOHN CLINGMAN.

Witnesses:

R. J. MCCARTY,
CHARLES W. DALE.