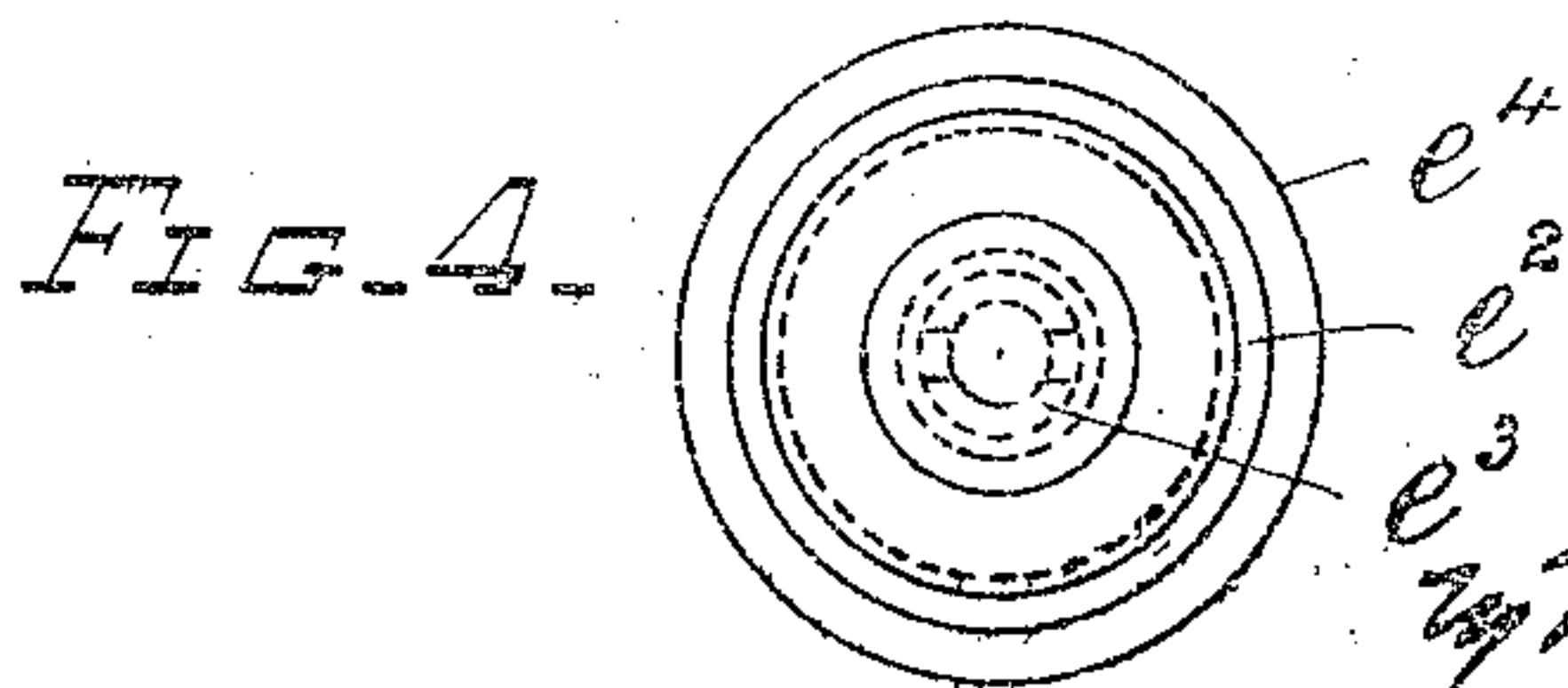
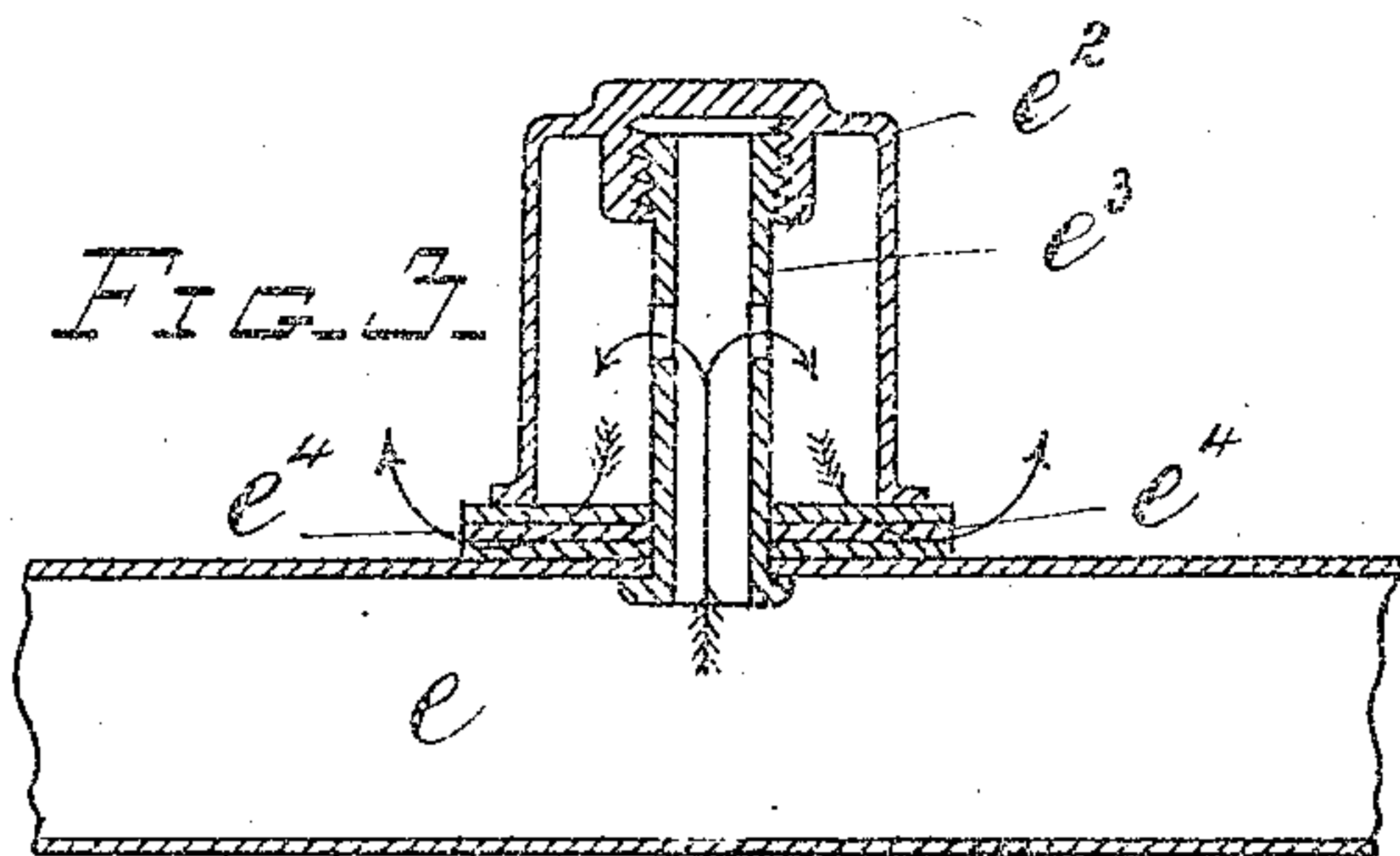
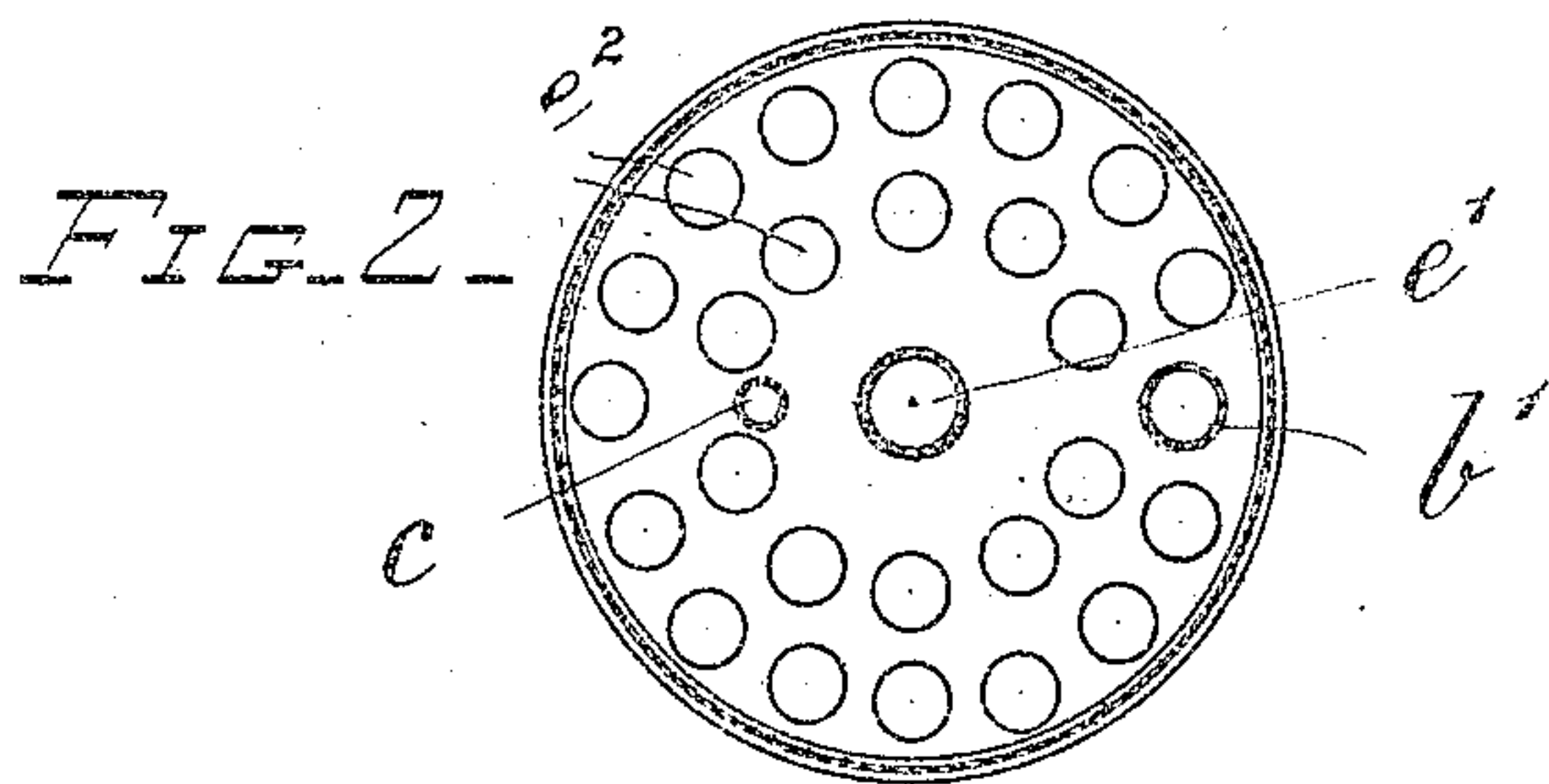
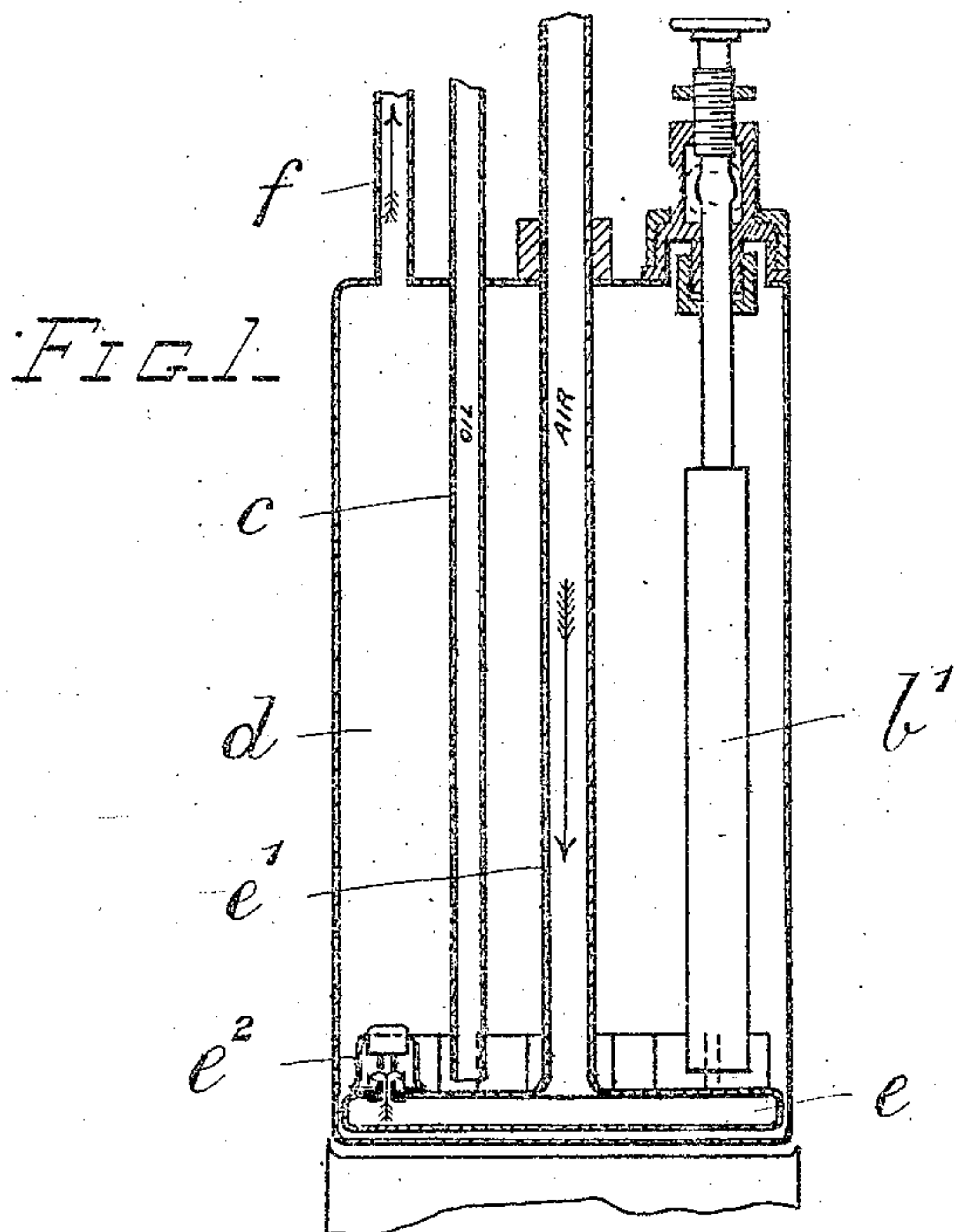


M. STEEL, JR.
CARBURETER.

APPLICATION FILED APR. 24, 1908.

934,367.

Patented Sept. 14, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

MATTHEW STEEL, JR., OF GOSFORTH, ENGLAND.

CARBURETER.

934,367.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed April 24, 1908. Serial No. 429,009.

To all whom it may concern:

Be it known that I, MATTHEW STEEL, JR., a subject of the King of Great Britain and Ireland, residing at Gosforth, in the county of Northumberland; England, have invented certain new and useful Improvements in Carbureters; and I do hereby 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.

My invention relates to means for supplying air to carbureters, and the object of my invention is to supply air in a finely divided condition for carbureters intended for general use, such as for lighting, heating and power purposes, and for shops, motor cars, etc.

With this object in view, my invention consists in the construction and combinations of parts as hereinafter described and claimed.

In the accompanying drawing—Figure 1 is a vertical section through the carbureter, showing the air drum and air nozzles. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical section on an enlarged scale through an air nozzle and porous pads, and Fig. 4 is a top view of the same.

d represents the carbureter which may be of any suitable construction or shape, but is shown in the drawings as cylindrical. Within the carbureter, near the bottom thereof, is a flat cylindrical vessel or air drum e , through which air is supplied through a pipe e' from any suitable source of supply, either hot or cold air being used, as desired, and the carbureter may rest upon a hot water tank, the upper part of which is shown in Fig. 1.

c is the oil feed pipe.

f represents a pipe through which the carbureted air is delivered to the place of consumption, and b' represents an oil feed regulator consisting of a tube which may be screwed up and down as fully described in my companion application, Serial No. 429,008, filed April 24, 1908.

On the top of the air drum are located a number of air nozzles through which the air is admitted to the carbureter. Each of these consists of a tube e^3 , open at both ends and perforated near its center. The lower end of the tube is riveted or secured to the top of the air drum, and the upper end of

said tube is screw-threaded and engages a screw-threaded boss on the cylinder e^2 , closed at the top and open at the bottom and substantially surrounding the tube e^3 .

e^4 represents a series of porous pads which are held between the lower expanded end of the cylinder e^2 and the upper wall of the air drum e .

The porous pads e^4 are immersed, or partially immersed in the oil which comes in through the feed regulating pipe b' . The pressure on the pads e^4 is regulated by screwing the cylinder e^2 up or down.

The air under pressure passes out through the perforations in the side of the pipe e^3 into the cylinder e^2 and then passes through the porous pads, which are saturated with oil. As both the oil and air are in a finely divided state as the latter is driven through the pads, the result is that the evolved mixture is more equable in quality, volatility and density, while the small quantity of oil in the carbureter at one time renders accidents less probable and less dangerous, if they should occur.

I claim.

1. In a carbureter, the combination of an inclosing vessel provided with an oil inlet and a gas outlet and means for supplying air to said vessel, including a pipe leading into said vessel from an air supply, an air drum into which said pipe delivers air, and a series of cylinders and porous pads between said cylinders and air drum, substantially as described.

2. In a carbureter, the combination of an inclosing vessel, an oil pipe leading into said vessel, a gas discharge pipe leading from said vessel, an air drum located near the bottom of said vessel, an air pipe leading into said drum, a series of short pipes provided with perforations for the admission of air into the carbureter, cylinders attached to one end of said pipe, and porous pads between the lower ends of said cylinders and said air drum, substantially as described.

3. In a carbureter, the combination of an inclosing vessel, an oil pipe leading into said vessel, a gas discharge pipe leading from said vessel, an air drum located near the bottom of said vessel, an air pipe leading into said drum, a series of short pipes provided with perforations for the admission of air into the carbureter, cylinders attached to one end of said pipe, porous pads between

the lower ends of said cylinders and said air drum, and means for warming said vessel, substantially as described.

4. In a carbureter, the combination of an inclosing vessel, an oil pipe leading into said vessel, a gas discharge pipe leading from said vessel, an air drum located near the bottom of said vessel, an air pipe leading into said drum, a series of short pipes provided with perforations for the admission of air into the carbureter, cylinders attached to one end of said pipe, and porous pads between the lower ends of said cylinders and said air drum, and means for regulating the supply of oil to said vessel, substantially as described.

5. In a carbureter, the combination of an inclosing vessel, an oil pipe leading into said

vessel, a gas discharge pipe leading from said vessel, an air drum located near the bottom of said vessel, an air pipe leading into said drum, a series of short pipes provided with perforations for the admission of air from said drum into said carbureter, cylinders adjustably secured to one end of said pipes, respectively, and porous pads between the lower ends of said cylinders and said air drum, the pressure on said pads being varied by screwing said cylinders in either direction, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

MATTHEW STEEL, JUNIOR.

Witnesses:

H. NIXON,

JAS. BROWN.