

F. SVAGELL & W. H. PADFIELD.
 CARBURETER FOR GAS AND GASOLENE ENGINES.
 APPLICATION FILED SEPT. 18, 1909.

986,605.

Patented Mar. 14, 1911.

Fig. 2.

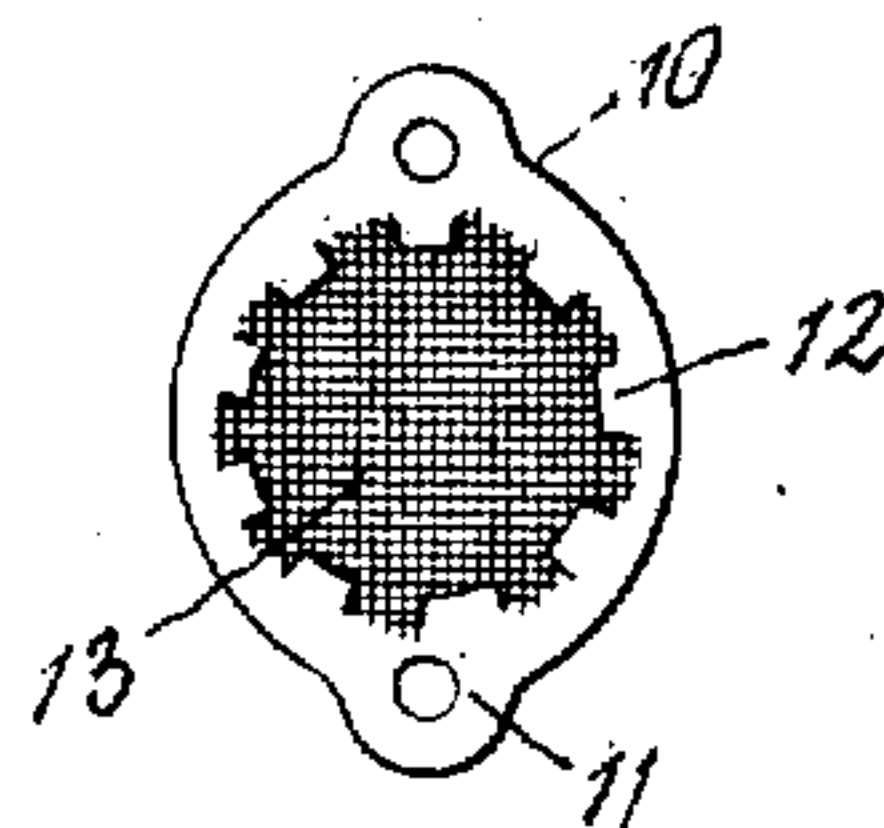


Fig. 1.

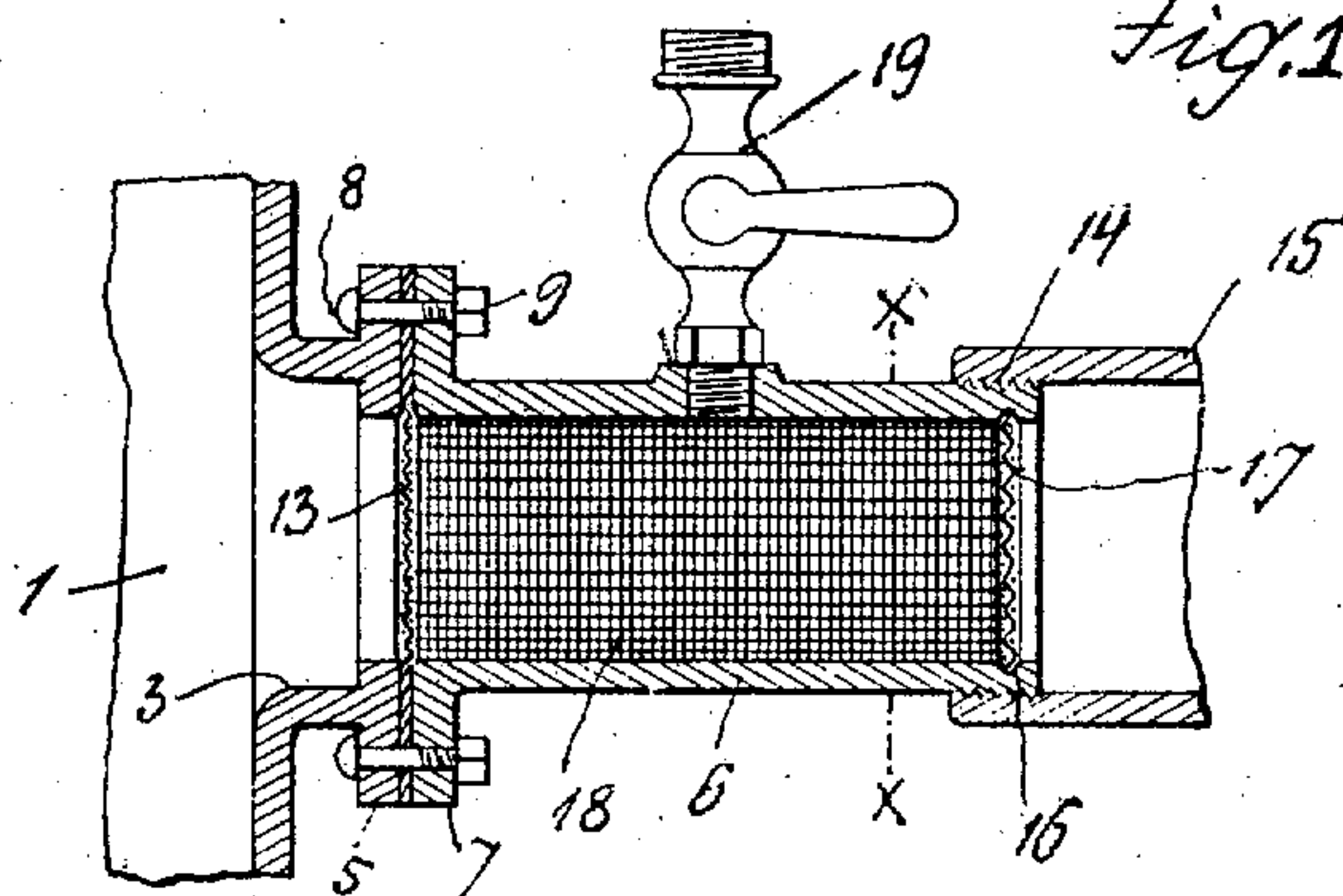


Fig. 3.

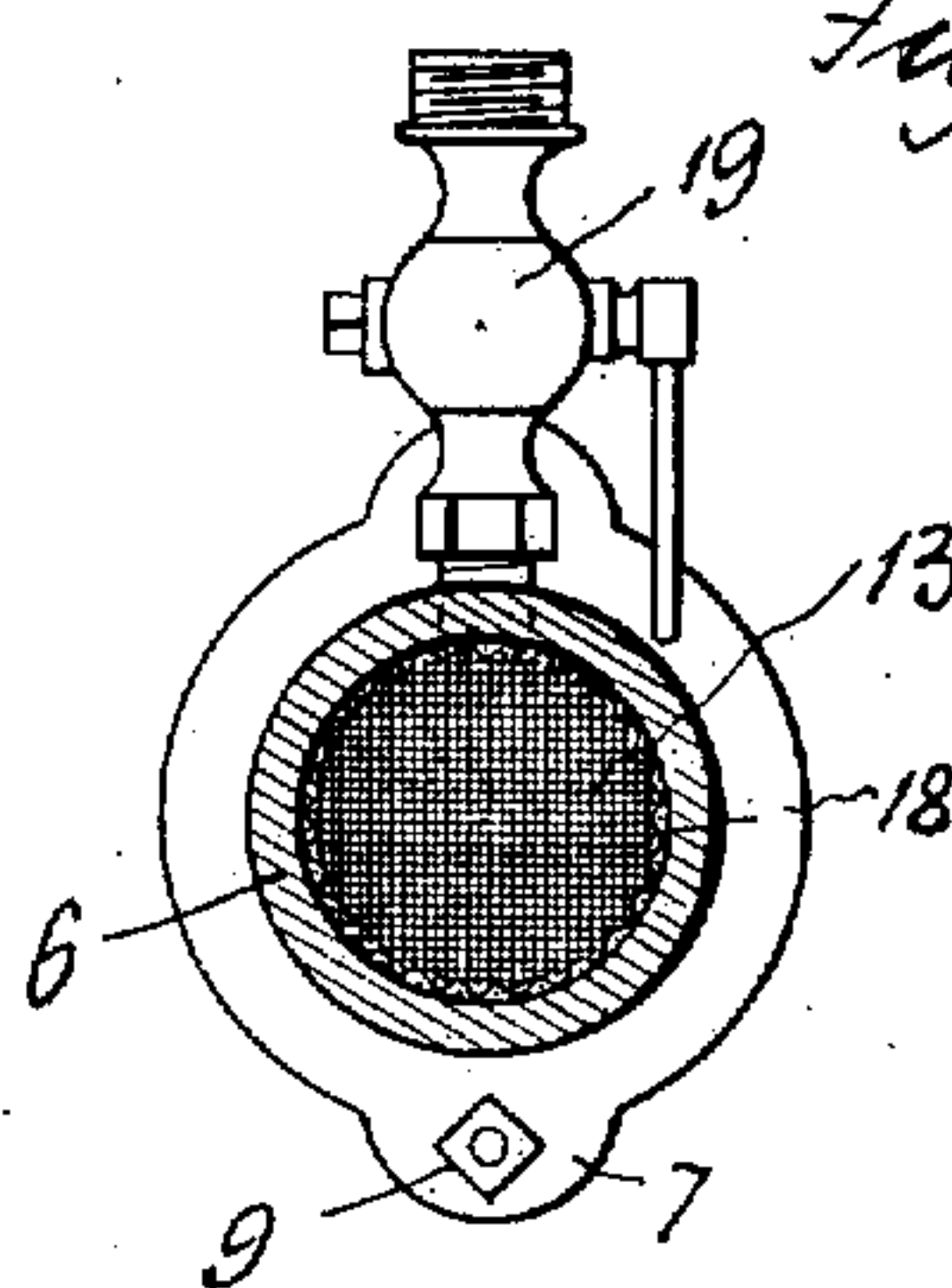


Fig. 4.

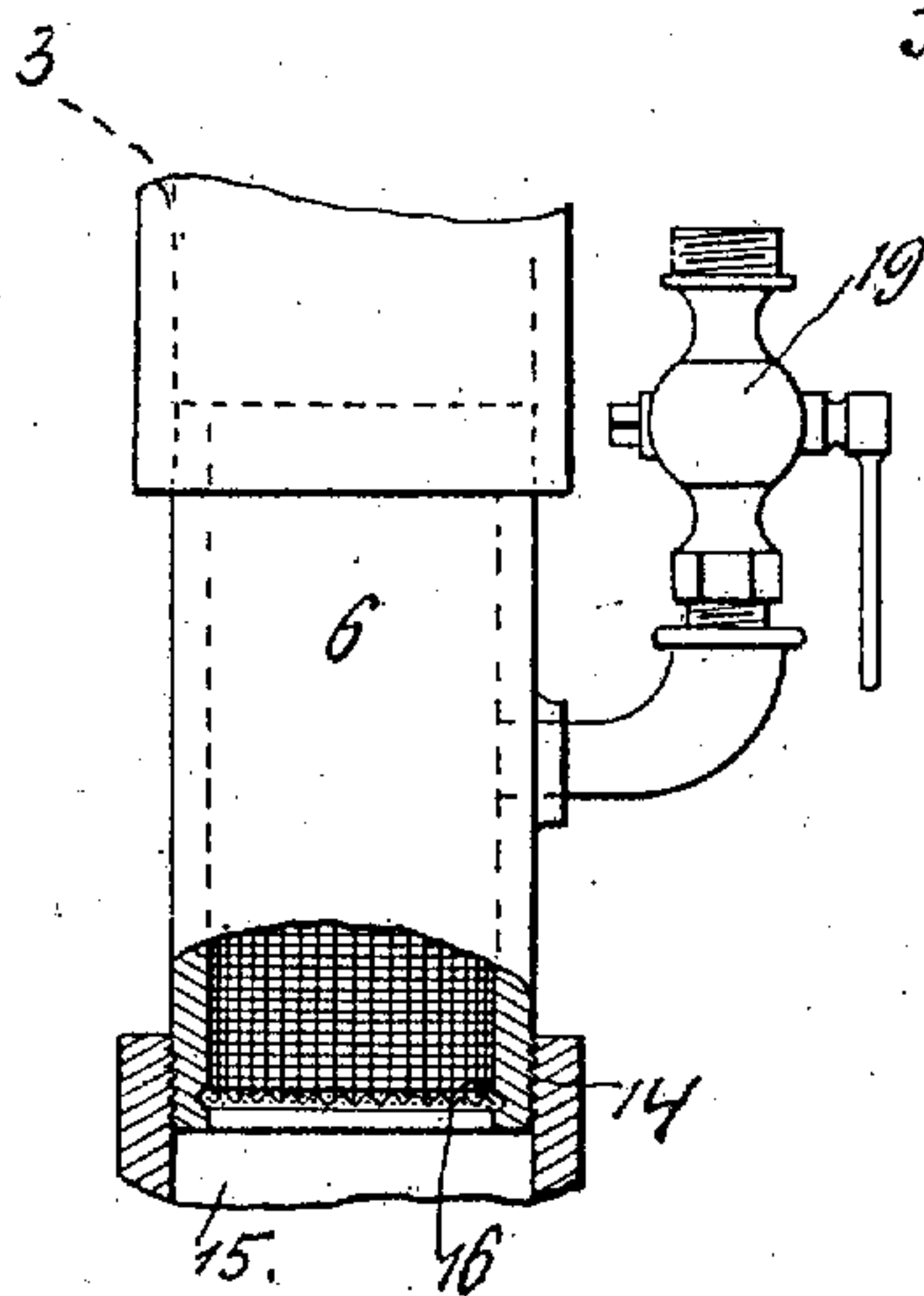
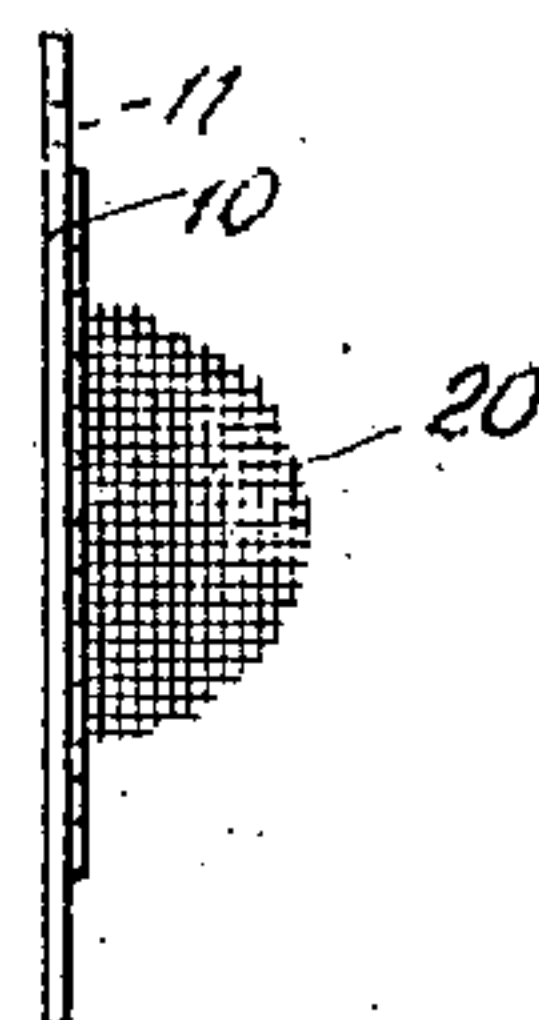


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANCK SVAGELL AND WILLIAM H. PADFIELD, OF VERONA, PENNSYLVANIA.

CARBURETER FOR GAS AND GASOLENE ENGINES.

986,605.

Specification of Letters Patent.

Patented Mar. 14, 1911.

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To all whom it may concern:

Be it known that we, (1) FRANCK SVAGELL and (2) WILLIAM H. PADFIELD, (1) a subject of the King of Hungary, (2) a citizen of the United States of America, residing at Verona, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Carbureters for Gas and Gasolene Engines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to attachments for gasolene engines, and the objects of our invention are, first to provide an attachment that will increase the explosive power with a minimum expenditure of fuel; second, to furnish an attachment that will prevent "backfire," and serve functionally as a mixer or vaporizer; third, to provide an attachment that will prevent an overheating of the cylinders of the engine, and fourth, to provide a simple, durable and inexpensive attachment that can be used in connection with various types of gasolene engines.

We attain the above and such other objects as may hereinafter appear by an attachment that will be hereinafter described in detail and then claimed.

Reference will now be had to the drawing forming part of this specification, wherein there is illustrated the preferred embodiments of the invention; but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage without departing from the spirit of the invention.

In the drawings:—Figure 1 is a longitudinal sectional view of the attachment designed for the gasolene engine of a motor boat. Fig. 2 is a front elevation of a detached sleeve. Fig. 3 is a cross-sectional view taken on the line $x-x$ of Fig. 1. Fig. 4 is a side elevation of an attachment partly broken away and partly in section, as designed for another type of gasolene engine, and Fig. 5 is a side elevation of a modified form of screen or sieve.

In the drawing the reference numeral 1 denotes a gasolene engine cylinder adapted to receive gasolene through the medium of a pipe 15 from a "carbureter" not shown. The cylinder 1 is provided with a flanged inlet port 3.

The reference character 6 denotes a pipe for establishing communication between the

pipe 15 and the inlet port 3 and said pipe 6 is provided at one end with a flange 7 which is coupled with the flange of the inlet 3 by the bolts 8 and nuts 9. The pipe 6 at its other end is interiorly threaded as at 14 for engagement with the threaded inner face of the pipe 15. The flange of the inlet 3 is indicated by the reference character 5 and interposed between the flanges 5 and 7 is a frame 10 having oppositely-disposed lugs 11 through which extend the bolts 8. The frame 10 is formed with inwardly-projecting lugs 12 to which is secured a circular screen 13. The screen 13 is made of gauze having a mesh capable of retarding foreign matter carried by the gasolene, and furthermore having a property of disseminating or vaporizing the gasolene which engages the explosive power of the mixture, and said screen furthermore prevents backfire. That end of the pipe 6 which is not provided with the flange 7 has its inner face formed with an annular groove 16 for the seating of a screen 17. Interposed between the screens 13 and 17 and constituting a lining for the inner face of the pipe 6 is a cylindrical cage 18 constructed of gauze or a fine mesh.

Connected to the pipe 6 intermediate the ends thereof is a valve 19, which in Fig. 1 of the drawings is shown in a closed position and in Fig. 3 in an open position. This valve is employed for admitting a small quantity of gasolene to the pipe 6. After a few drops has entered the pipe 6, the valve is closed. The engine can then be "cranked" and the suction of air within cylinder 1 is adapted to draw the small quantity of gasolene contained within the pipe 6 into the cylinder 1 and this is to facilitate the starting of the engine. The cage 18 holds the small quantity of gasolene in suspension and tends to cause the gasolene to spread.

As shown in Fig. 1 the pipe 6 is in a horizontal position for an engine having a vertical cylinder, while in Fig. 4 the pipe 6 is in a vertical position for an engine having a horizontal cylinder. In this instance the pipe 6 is secured in the inlet port 3 of an engine cylinder 1 (not shown). The cage 18 serves the same function as heretofore described and the suction of air in the engine cylinder is adapted to draw the small quantity of gasolene upwardly into the engine.

The modification shown in Fig. 5 represents the frame or ring 10 provided with a cup-shaped screen or sieve 20 adapted to extend into the end of the pipe 6.

5 Since some engines are provided with flanges for securing gasoline inlet pipes to the engine, we devised the attachment shown in Figs. 1 and 2, while the ends of the pipe 6 can be threaded for engines having interiorly threaded inlet ports.

10 We attach considerable importance to the construction shown in Fig. 1, since by slight changes the attachment is applicable to various types of gasoline engines.

15 Having now described our invention, what we claim as new is:—

1. The combination of an engine cylinder having an inlet, a pipe having one end connected to said inlet and having at its other
20 end an interiorly-arranged groove and leading to a carbureter, frames interposed between the inlet and said pipe, a screen secured in position by said frames, a screen mounted in said groove, a cylindrical cage

formed of wire gauze having both ends open 25 and mounted in and snugly engaging and constituting a lining for the inner face of said pipe and extending from one screen to the other, and a valve mechanism carried by and communicating with the interior of said 30 pipe.

2. The combination of an engine cylinder having an inlet, a pipe connected with said inlet and leading to a carbureter, a screen located at each end of said pipe, a cylindrical 35 wire gauze cage open at each end and mounted in said pipe and further snugly engaging the inner face of the pipe and constituting a lining for said inner face, and a valve mechanism carried by the pipe and 40 communicating with the interior thereof.

In testimony whereof we affix our signatures in the presence of two witnesses.

FRANCK SVAGELL.

WILLIAM H. PADFIELD.

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