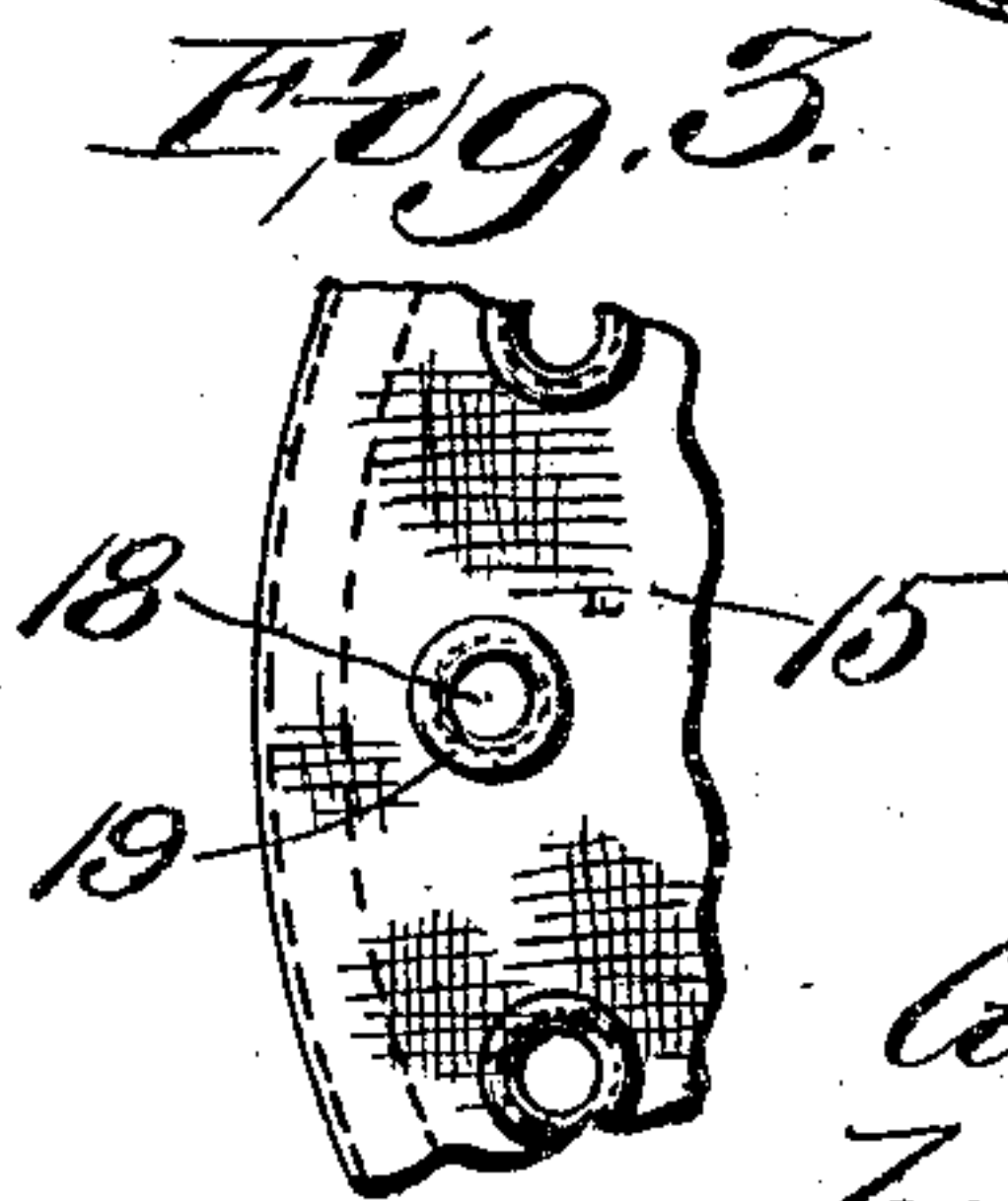
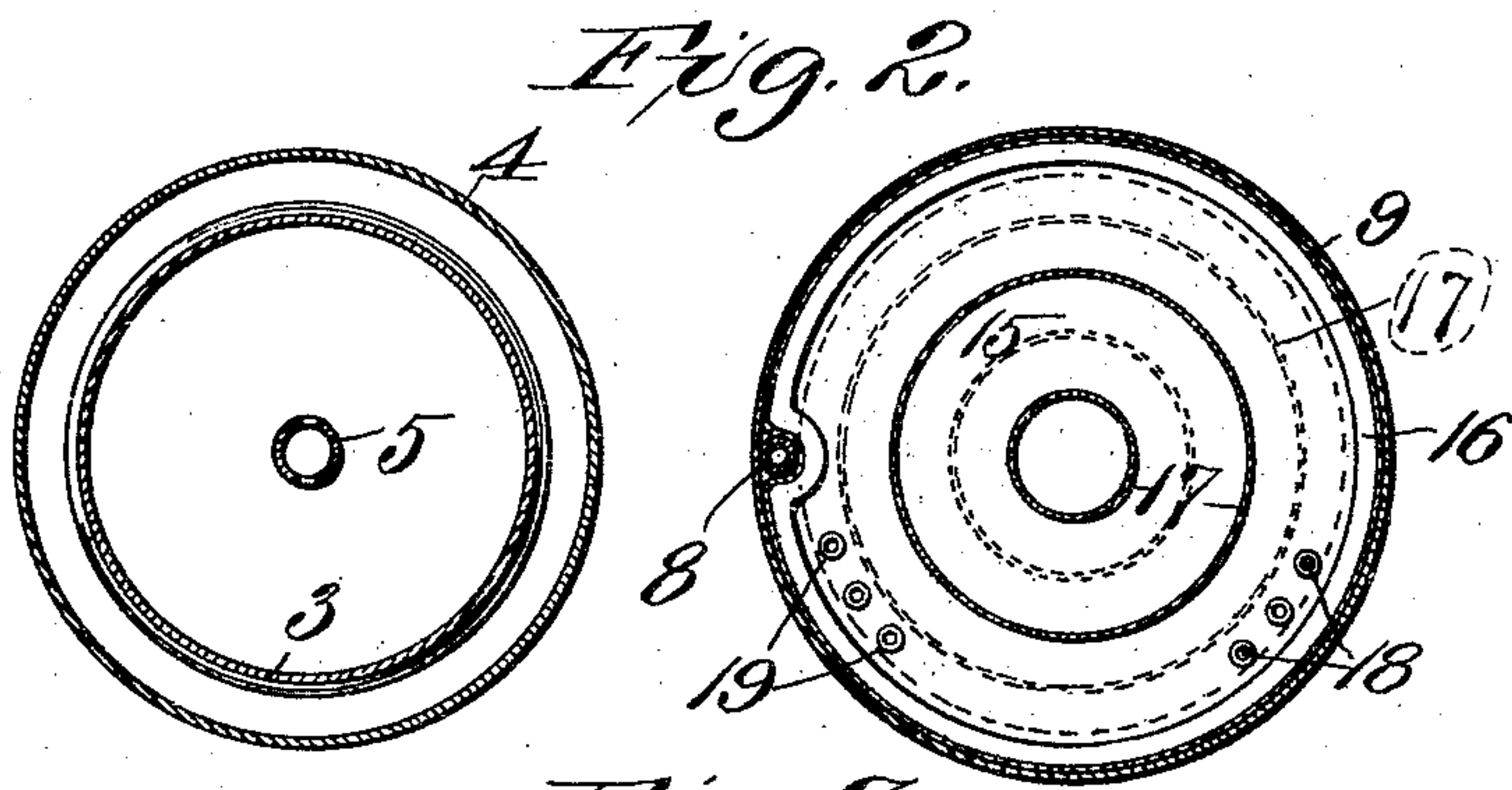
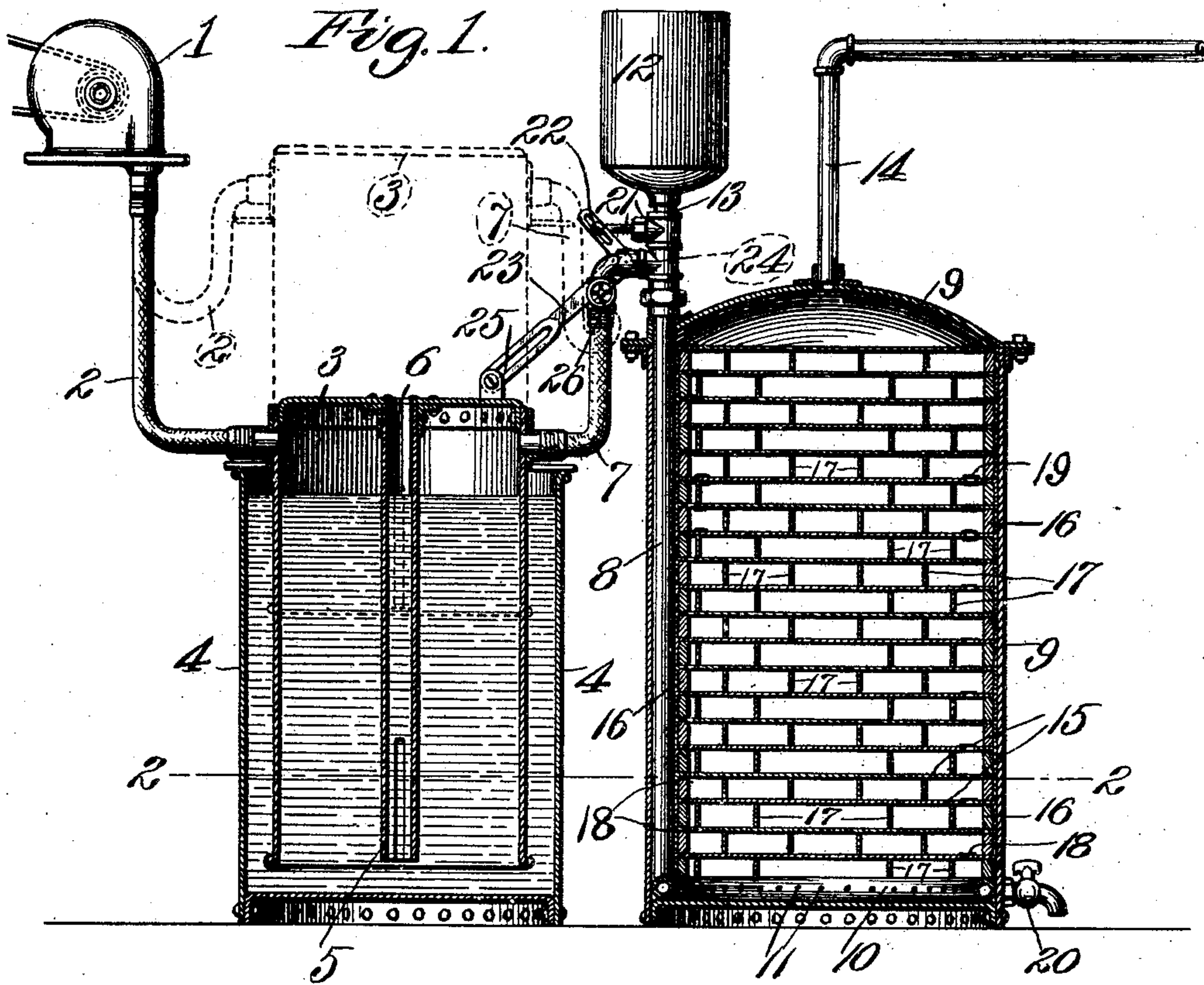


G. F. ISGRIG.
CARBURETER.

APPLICATION FILED JULY 27, 1906.

929,135.

Patented July 27, 1909.



Attest:
Wm. H. Fedt.
F. J. McCarlin.

Inventor:
George F. Isgrig,
by J. R. Rippey,
att'y.

UNITED STATES PATENT OFFICE.

GEORGE F. ISGRIG, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH TO ALPHONSE A. SCHIERMAN, AND ONE-FOURTH TO WILLIAM PROTT, OF ST. LOUIS, MISSOURI.

CARBURETER.

No. 929,135.

Specification of Letters Patent.

Patented July 27, 1909.

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To all whom it may concern:

Be it known that I, GEORGE F. ISGRIG, a citizen of the United States, residing at St. Louis, Missouri, have invented a new and useful Carbureter, of which the following is a specification.

This invention relates to carbureters and consists in the novel construction, combination and arrangement of parts including a blower or instrument serving like purposes, a pressure regulator, a generator vessel having connection through the pressure regulator with the blower, a supply source communicating with the connection from the generator to the pressure regulator, and improved carbureting parts in the generator, all arranged and coöperating in the manner hereinafter specified.

Other features and objects of invention will appear from the following description, reference being made to the accompanying drawings in which—

Figure 1 illustrates the construction and arrangement of the essential features, the pressure regulator and generator beingshown in vertical section. Fig. 2 is a cross sectional view taken approximately on the line 2—2 of Fig. 1 looking downward, and Fig. 3 is a detail view, showing a portion of a perforate partition in the generator.

In using, and as a part of or in combination with, my invention a blower 1, of any suitable type or construction, is mounted in convenient position to drive air through a pipe 2. The pipe 2 is flexible or has flexible connection with a regulator vessel 3 weighted to secure the required pressure. The vessel 3 is closed at the top and open at the bottom and the greater portion thereof is immersed in water in a tank or container 4 which, essentially, is somewhat larger than the vessel 3, and is open at the top so that the vessel 3 may have free vertical, and some lateral movement therein. An exhaust pipe 5 projects downwardly from a hole 6 in the top of the vessel 3 and has one or more slots running from its lower end, so that whenever the vessel 3 is raised until the upper extremities of the slots are above the surface of the water, the air forced into the vessel 3 from the blower can escape through the pipe. Such position of the vessel 3 is shown by dotted lines in Fig. 1. Conditions resulting in such operation will be hereinafter explained.

A flexible pipe or hose 7 leads from the

upper end of the vessel 3 to a supply pipe 8 which extends into a generator tank 9. A coil 10 is attached to the lower end of the pipe 8 and has a series of holes 11 through its inner side through which the air and carbureting fluid may be sprayed. A supply vessel 12 has pipe connection 13 leading to the pipe 7 or the pipe 8, and the fluid passing into said last named pipes is, to a great extent, immediately converted into spray by the rushing air. The entire amount of fluid, whether in the form of spray or otherwise, is driven into the coil 10 and sprayed through the holes 11 into the bottom of the generator tank.

Within the generator 9, between the coil 10 and an outlet pipe 14, is a series of partitions 15, of cloth or gauze, and arranged relatively close together. These partitions are held by hoops 16, between which and the wall of the generator the edges of the partitions are held. A number of curtains 17 are suspended from each partition, and swing to the next lower partition, thereby forming cloth connection from near the bottom to near the top of the generator. In one partition near the bottom near one side of the generator a few holes 18 are formed and near the diametrically opposite side of the generator a few holes are also formed in the partition next above. Within these holes eyelets 19 may be arranged, as shown in some of the partitions, or they may be mere perforations as shown in others. In the next partition above the second one having holes no holes are formed, and the entire number of partitions, except a few at the top, is preferably arranged in several such series of three, two of each series having perforations on diametrically opposite sides of the tank and the third having no perforations other than those natural to the weave. A few, say five or six, of the partitions near the top of the generator have no holes such as 18 formed therein. A valve 20 is arranged at the bottom of the generator 9 for drawing off any residue or refuse that may collect there.

An automatic valve is employed to govern the flow or passage of the fluid from the supply vessel 12 through the pipe 13. This valve comprises a valve chamber and a sliding needle valve 21 operating in said chamber, both being of known construction. The valve 21 has two flanges or arms 22 between which the end of a bell-crank lever 23 pro-

jects, said lever being pivoted at 24. The other arm of said lever 23 is pivoted by pin-and-slot connection 25 to the regulator vessel 3 so that, as is obvious, the vertical movement of said vessel 3 will result in operation of the valve to increase or diminish the flow of fluid. When the vessel 3 is raised to permit escape of air through the pipe 5, as occurs when the quantity of carbureted air passing through the pipe 14 is less than the quantity of air forced into said vessel 3, there will be a proportionate reduction in the amount of fluid admitted through the valve 21, which reduction is effected by the valve 21 being operated by the lever 23 partially to close the valve. The closing the pipe 14 results in the entire quantity of air forced into the vessel 3 finding escape through the pipe 5, and the parts are adjusted so that, when the vessel 3 is raised to the necessary altitude to permit such escape, the valve 21 will be entirely closed. The pipe 7 may be provided with a valve 26 to control or regulate the supply of air into the generator.

I have shown and described a preferred construction, combination and arrangement of parts included in my invention, but am aware that there may be variations therefrom in certain particulars without departing from the spirit and scope of my invention.

Therefore, without restricting myself to specific or inessential details of construction, what I claim and desire to secure by Letters Patent is:

1. In a carbureter, the combination of a container filled with water, a regulator vessel extending into said water, means for forcing air into said regulator vessel to operate said vessel vertically, a generator vessel, a flexible

pipe connection between the regulator vessel and the generator vessel, a supply vessel, pipe connection from said supply vessel to said first-named pipe connection, a valve in said last-named pipe connection, and lever connection between said valve and the regulator vessel whereby said valve will be automatically opened and closed when the regulator vessel moves, substantially as specified.

2. In a carbureter, the combination with a container filled with water, a regulator vessel extending into said water, a generator vessel, a flexible pipe connection between the regulator vessel and the generator vessel, a supply vessel, pipe connection from said supply vessel to said first-named pipe connection, an outlet pipe from said generator vessel, a plurality of cloth partitions in said generator vessel between the pipe connection from the supply vessel and the said outlet pipe, means for forcing air into said regulator vessel effectively to operate the same vertically and to force the gas through said cloth partitions into said outlet pipe, a valve in said pipe connection leading from said supply vessel, and a lever connecting said valve and the regulator vessel whereby said valve will be automatically opened and closed dependent upon the vertical movement of said regulator vessel and the quantity of carbureted air in the generator vessel, substantially as and for the purpose specified.

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

GEORGE F. ISGRIG. [L. s.]

Witnesses:

F. J. McCASLIN,
J. D. RIPPEY.