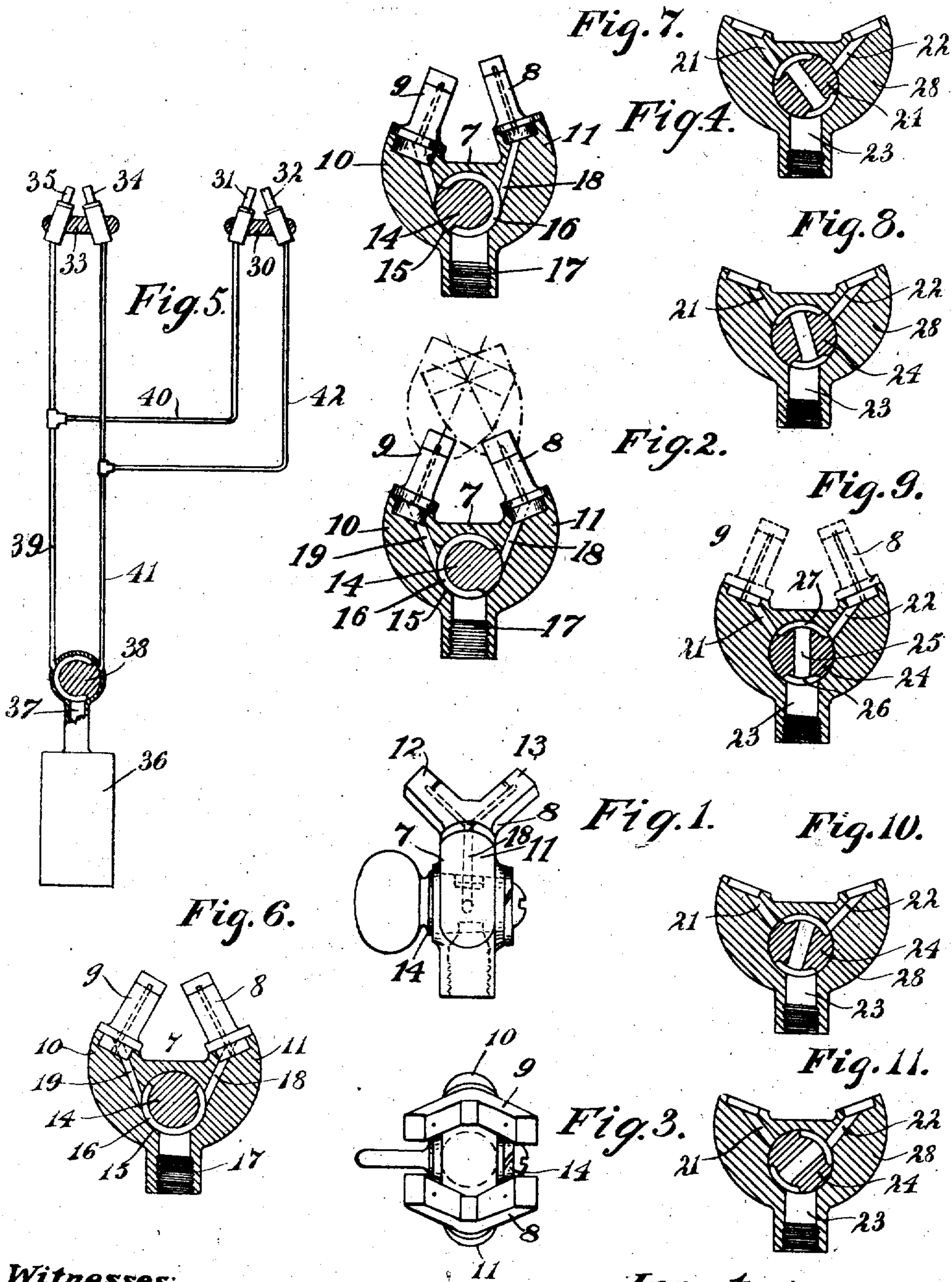


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BURNER FOR GAS LAMPS.  
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979,335.

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# UNITED STATES PATENT OFFICE.

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## BURNER FOR GAS-LAMPS.

979,335.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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*To all whom it may concern:*

Be it known that I, WILLIAM H. REID, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Burners for Gas-Lamps, of which the following is a specification.

This invention has for its object to provide a burner device for gas burners in which a pair of burners are supported in position to cause a flat flame to be produced at the same place relatively to the member or device, upon gas being supplied under pressure; and is especially designed for use with acetylene lamps for motor cars, and with the employment of the usual forked or impinging jet style of burner.

A further object is to provide in such a device, two burners of different capacity or candle-power, so that by simply diverting the flow of gas to either burner, a bright light or a small light can be obtained at will, without the necessity of changing or shifting the burner members.

In the accompanying drawing, showing embodiments of my invention, Figure 1 is a side elevation; Fig. 2 is a vertical section; Fig. 3 is a plan view; Fig. 4 is a vertical section showing different sized burners; Fig. 5 shows diagrammatically means for distant control; Fig. 6 is a section like Fig. 2 with valve shifted; and Figs. 7-11 show vertical sections of another form of valve device.

The invention, broadly stated, comprises a burner device having a pair of burners inclined toward each other, so that the flame from each burner will be located in practically the same place, when either burner is lighted. As shown the burner device comprises a chambered body member 7 having burner members or tips 8 and 9, set in socket portions 10, and 11, in the body. The members 8 and 9, which are usually made of some highly refractory material such as lava, are shown of the forked variety, having arms 12 and 13 each, that have gas orifices emerging on their inner or opposite faces, and convergent to cause the jets issuing therefrom to impinge and produce a flat flame, and in a plane perpendicular to the plane of the arms. These two burner members 8 and 9 are inclined toward each other, or convergent, and the planes of their arms will intersect in a horizontal line a short distance above the device. The two burner members

are so positioned that the flat flames caused thereby will be in the same plane; and by spacing them the proper distance apart these flames will be caused to be in practically the same place relative to the body member, upon supplying gas under pressure to the burner members alternately.

When the device is applied to a lamp, the burners will produce a flat flame in the focus of the reflector, and either burner, when supplied with gas, will be in the proper position to have its rays used to the best advantage by the lamp.

The body member is preferably provided with a shunting device whereby the gas from a supply pipe can be directed to either burner member at will. The body 7 has a bore 15 in which turns a valve 14, which has a recess or channel 16, that in one position of the valve will connect the inlet port 17 of the body, with a passage 18 leading to the burner member 8; as shown in Fig. 4. When the valve is turned from this position the channel will connect the inlet port 17 with the passage 19 leading to the burner member 9, and the burner 8 is now cut out from gas supply. This channel 16 is preferably so shaped that when turning the valve from one position to the other, upon one burner being lighted, the dead burner is partly connected and will receive a small supply of gas, before the other burner is entirely cut out and extinguished. Hence, by slowly turning the valve, the dead burner will ignite before the other becomes extinguished; and the use of lighting means is not required, as the one burner will light from the other.

In the use of my invention where the two burners are of the same candle power, when the burner in use becomes clogged, as quite frequently occurs by fine particles lodging in the small passages of the tip member, the valve is simply turned slowly and the burner in use is cut out, while the other burner is connected with the supply pipe, and at the same time will ignite from the burner that is being extinguished.

If desired the valve may be omitted entirely, and each burner connected with a separate supply conduit, as indicated in Fig. 5, in which two burner members are shown.

In certain localities it is required that the illumination of vehicle lamps be restricted to a small amount, such as sixteen candle



power. This is generally in towns with well lighted streets. But when the occupants of a motor car drive out of such restricted districts at night, it is very desirable to be able to have the maximum illumination, such as a candle power of one hundred. This is easily accomplished by my invention by having one of the burner members 8, of small capacity, as sixteen candle power; while the other burner 9 is of larger capacity as one hundred candle power; as indicated in Fig. 3. When the car is running in the restricted area the valve is turned to cause the low power burner to be connected with the supply pipe; and when the car leaves the restricted territory, the valve is slowly turned to bring the larger burner into service, that will ignite, and the small burner is thereupon cut out.

In Fig. 5 is represented diagrammatically means for controlling two lamps having the double burner device, from the seat of a motor vehicle. The burner device 30 of one lamp has the two inclined burners 31 and 32. The other lamp has the burner device 33 provided with the inclined burners 34 and 35. A source of gas supply 36, such as a tank or generator, is connected with a valve device or member 38 by pipe 37. A main conduit 39 connects the valve 38 with one burner 35 of one lamp; while a branch conduit 40 leading from the conduit 39 runs across to the burner 31 of the other lamp. A main conduit 41 connects the valve 38 with the other burner 34 of one lamp; while a branch 42 runs from the latter conduit over to the other burner 32 of the other lamp. By this means the valve 38, which may be an ordinary three-way valve or of the form shown in Fig. 2, when in one position will connect the gas supply with one burner of each lamp; and when shifted the valve will cut these burners out and connect the other burner of each lamp with the gas supply. By using one large and one small burner in each lamp, and connected with the same main conduit, the valve will serve to connect either the small or the large flame, and produce the full light, or the restricted light, by merely operating one valve from the driver's seat on the car.

Another form of valve device is shown in Figs. 7-11, in consecutive positions. The valve body 28 has burner ports 21 and 22, that connect with inlet port 23 in the body, by passage 25 in plug valve 24. The passage 25 has a wide outlet port 27 that connects with the ports 21 and 22; and also wide port 26 that connects with port 23. In the position shown in Fig. 8, port 27 of the plug connects with the burner 21, and port 26 of the plug connects with the inlet 23, admitting full flow of gas to one burner connected with port 21. When the valve is turned to the position shown in Fig. 9, the

port 27 connects with both of the burner ports 21 and 22, and gas is also admitted to the burner 8, that will light from burner 9, previously lighted. A further movement of the plug will cut off the port 21 and burner 9. If it is desired to have a restricted flow to burner 8, the plug is shifted to the position of Fig. 11, when the port 26 will register with only a small portion of the gas port 23 in the body. And to obtain a restricted flow of gas to the burner 9, the plug is turned to the position of Fig. 7, in which the port 21 is in connection with the valve port; but the port 26 will only register with a portion of the inlet port 23. By using this form of valve with the arrangement shown in Fig. 5, either burner can be controlled from the seat of a car, to give a full or a restricted light.

Having thus described my invention, what I claim is:—

1. A burner device provided with a pair of forked burner members each having a pair of jet orifices convergent to meet and produce a flat flame in the same place in the same plane relative to the device, the plane of the jets of one burner being inclined to the plane of the jets of the other burner to intersect above the device.

2. A burner device provided with a pair of forked burner members each having a pair of jet orifices convergent to meet and produce a flat flame in the same place in the same plane relative to the device, the plane of the jets of one burner being inclined to the plane of the jets of the other burner to intersect above the device, a gas supply pipe, and means for shunting the gas from the pipe to the burners alternately.

3. A burner device provided with a pair of forked burner members each having a pair of jet orifices, of different capacity convergent to meet and produce a flat flame in the same place in the same plane relative to the device, the plane of the jets of one burner being inclined to the plane of the jets of the other burner to intersect above the device.

4. A burner device provided with a pair of forked burner members each having jet orifices convergent to produce a flat flame, the burner members being inclined with the planes of the forks convergent to intersect in a horizontal line a short distance above the burners.

5. A burner device provided with a pair of forked burner members each having jet orifices convergent to produce a flat flame, the burner members being inclined with the planes of the forks convergent to intersect on a horizontal line a short distance above the device, a gas supply pipe connected with the device, and a valve operative to divert the gas to either burner member at will.



6. A burner device provided with a pair of forked burner members of different capacity, each member having jet orifices convergent to produce a flat flame, the burner members being inclined with the planes of the forks convergent to intersect on a horizontal line above the device.

7. The combination of a pair of burner devices, each device having a pair of forked burner members positioned to produce a flat flame in the same place in the same plane relative to the device, a source of gas supply, a valve device, a conduit connecting the gas source with the valve, a main conduit leading from the valve to one burner

of one of the devices, a branch from said conduit to one burner of the other device, a main conduit from the valve to another of said burners, and a branch from the latter conduit to the other burner of the other device, the valve being arranged to connect said main conduit with the gas supply, whereby to connect one burner of each device with the gas supply in one position, and to connect the other burner in each device with the gas supply in another position.

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