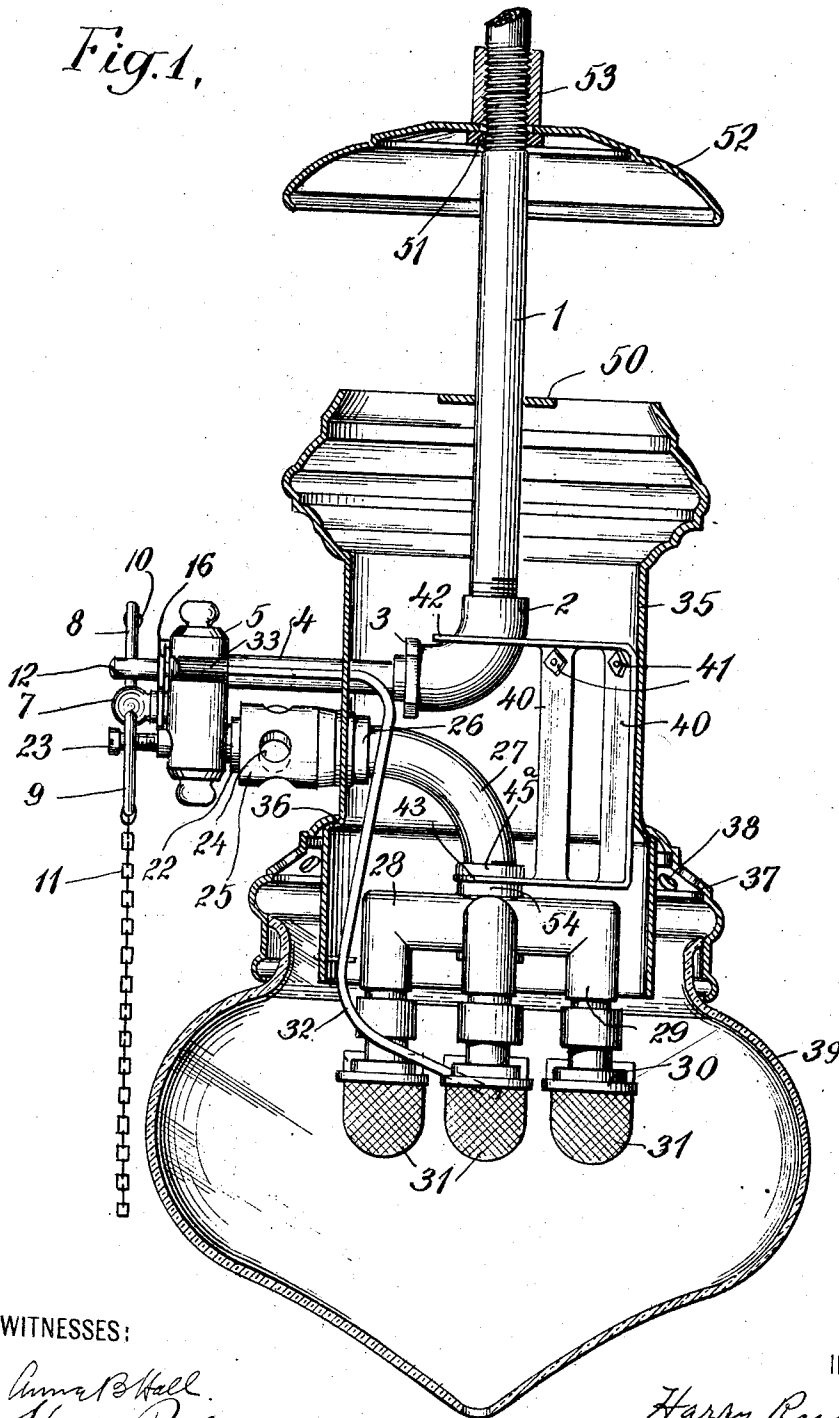


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GAS LAMP.
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1,040,019.

Patented Oct. 1, 1912.
2 SHEETS—SHEET 1.

Fig. 1,



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GAS-LAMP.

1,040,019.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY RUBIN, a citizen of the United States, residing in the city of New York, county and State of New York, have invented certain new and useful Improvements in Gas-Lamps, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to lamps for burning ordinary illuminating gas and the present improvements are more particularly applicable to multiple burner lamps in which incandescent mantles are used and the principal objects of the invention are to reduce the number of parts and thereby simplify the construction of lamps of this type, and render the same less expensive to manufacture.

I have illustrated a type of my invention in the accompanying drawings, wherein:

Figure 1 is an elevation of a lamp constructed with my improvements, with the chimney, the hood and the glass globe shown in a vertical section. Fig. 2 is an enlarged view in vertical section of certain parts of the lamp as hereinafter described. Fig. 3 is a horizontal sectional view of certain details hereinafter referred to, the plane of the section being indicated by line 3—3 in Fig. 2.

Referring to the drawings in which like numbers of reference designate like parts throughout, 1 is the gas supply pipe which supports the lamp and to the lower end of which is screwed the upper end of a curved elbow 2, the lower end of which is threaded and receives a coupling piece 3, for supporting the pipe section 4 which is screwed into the coupling and extends horizontally to one side of the lamp. The outer end of the pipe section 4 is screwed into the valve casing 5 and is in communication with the central duct 6 in the casing which duct is controlled by the ordinary gas cock 7, the outer end of which is provided with two oppositely extending arms 8—9 having ordinary pull chains 10 and 11, respectively, connected therewith for turning on and off the gas. The turning movement of the gas cock 7 is limited by means of a removable stop 12 which at its inner end is provided with a screw threaded socket for receiving

the threaded end of a pin 13; the inner end of which latter is screwed into a threaded perforation 14 formed in the side of valve casing 5. The outer end of the stop 12 is provided with a slot 15 for receiving the end of a blade or screw driver for turning the stop either for the purpose of removing it or for increasing the tension on the spring washer 16, the forked end of which embraces an annular groove 17 near the outer end of the gas cock 7 while the elongated end is bent inwardly at 18 so as to bear against the exterior of the valve casing 5 and thereby afford a spring mounting for the washer. By turning down the stop 12 the tension on the spring washer 16 is increased and serves to make the gas cock fit tighter, while the reverse movement of the stop 12 will reduce the tension on the spring washer and cause the gas cock to turn easier, as may be desired. By this arrangement, I dispense with the ordinary screw and washer carried upon the inner end of the gas cock. It will thus be seen that the stop 12 while fixed in relation to the arms 8 and 9 of the gas cock, is adjustable angularly on its axis for the purpose of regulating the tension on the spring washer of the gas cock and in this way it serves a double function. It will also be noted that the screw threaded pin 13, in addition to serving as a mounting for the stop 12, also serves to maintain the spring washer 16 in position by reason of passing through the perforation 19 in the washer. This screw threaded pin 13 also serves as a removable closure for the lateral opening 14 which communicates with the central duct 6 of the valve casing and is in alinement with the axis of the pipe section 4, in order that access may be given to the interior of the pipe section when the pin 13 is removed, for the purpose of cleaning the pipe section.

The upper end of the valve casing 5 is provided with a threaded plug 20 which may be removed for the purpose of cleaning the central duct 6 of the valve casing. On its lower end the valve casing 5 is connected to the air chamber 21 by means of a threaded nipple 22 in which is arranged a needle valve 23 for regulating the jet opening through which the gas passes into the air chamber. The air chamber 21 is provided with lateral perforations 24 over which operates a shutter 25 for regulating the quantity of air admitted to the air chamber. The inner end of the valve cham-

ber 21 is threaded upon the interior and receives the threaded end of a coupling piece 26, the inner end of which is threaded to receive and support the end of the curved pipe section 27, the lower end of which extends downwardly in substantially vertical alinement with the supply pipe 1. Upon the lower end of the curved pipe section 27 is mounted by means of screw threads the tubular bracket 28 which in the present instance has four branches each carrying a nipple 29 upon each of which is removably placed a refractory burner 30, which carries an inverted incandescent mantle 31. The gang of burners is provided with a pilot light 32 which extends from a suitable point in the valve casing 5 where it is in communication with a passage 33 connected with the central duct 6 of the valve casing and from which it receives its supply of gas for the pilot, the flow of such gas for the pilot being regulated by a screw valve 34 extending through the side of the valve casing and having its conical end projecting into the mouth of the passage way 33 as indicated in Fig. 3.

The casing for the lamp comprises a tubular part 35 made of suitable material and this forms the chimney or flue for the products of combustion from the burners which lie a slight distance below the lower edge of the casing. The lower end of the casing is slightly enlarged and is formed with an external shoulder 36 over which extends the upper end of the annular hood 37 having the outlet-openings 38 and the lower end of which is adapted to receive and support the glass globe 39, which incloses the burners. The casing 35 is supported by means of an interior bracket 40 which is secured by means of bolts 41 to the interior of the casing and is provided at its upper and lower ends respectively with the supporting arms 42 and 43 the upper one of which is perforated at 44 to receive the curved elbow 2 and the lower one of which is perforated at 45 to receive the lower end of the curved pipe section 27, which as before stated is in vertical alinement with the gas supply pipe 1 and the upper end of the connected elbow 2. The lower end of the pipe section 27 is threaded upon the exterior and on this thread is placed a screw collar 45^a, and this collar rests upon the upper side of the supporting arm 43 so as to afford a substantial support to the pipe section 27 and its connected parts. This bracket 40 in addition to supporting the lamp chimney, also maintains the supply pipe and the pipe section 27 in central vertical position within the lamp casing 35, the side of which is provided with an opening 46 for the passage there-through of the gas pipe 4 and also with an opening 47 for the passage of the short pipe coupling 26, the latter being provided with

washers 48 and 49 upon opposite faces of the wall of the casing which make a tight joint when the pipe coupling 26 is screwed down hard into the threaded end of the air chamber 21, as hereinabove described. This arrangement also serves to clamp the coupling 26 with its connected parts firmly to the lamp casing. As the pipe section 4 also has a firm bearing on the lamp casing 35 these together with the firm mounting of the coupling 26 gives stability to the valve casing 5 which is supported by these parts. The upper end of the casing or chimney 35 which is enlarged and made ornamental upon its exterior is provided with a cross-piece 50 having a perforation through which passes the gas pipe 1 and this serves to give lateral support to the upper end of the chimney.

The gas pipe 1 is provided near its upper end with an external screw thread upon which is screwed a collar 51 and a heat bell 52 having a central perforation is placed over the gas pipe which extends through the perforation so that the bell rests upon the collar 51. A nut 53 is then placed over the gas pipe and screwed down against the upper side of the bell 52 and holds the same in fixed position.

It will be noted that the head or bracket 28 with its several radiating arms is a single casting and thus provides a very simple form of burner. The upper side of the bracket where it is attached to the curved pipe section 27 is formed with a boss or short extension 54 against which rests the under side of the arm 43 of the supporting bracket 40.

From the above description the operation of the lamp will be readily understood and briefly described it is as follows: The gas passing through pipe 1 is led to the valve casing 5 through the elbow piece 2 and the pipe section 4 and flows into the central duct 6 of the valve casing. The cock 7 being opened the gas passes through the central duct 6 and by way of the needle valve into the air chamber where after being mixed with the air it flows through the coupling 26, thence through the curved pipe section 27 to the bracket 28 from where it is delivered to the burners.

I find that a lamp constructed in this simple manner and of comparatively few parts is a very efficient one for illuminating purposes and that the cost of producing such a lamp is considerably reduced.

The supporting bracket 40 secured between the chimney and the gas supply and delivery pipes, affords a very substantial structure by reason of the fact that the upper arm 42 of the bracket engages the elbow 2 of the supply pipe while the lower arm 43 engages the delivery pipe section 27 and is clamped between the collar 45^a on the pipe 130

section, and the boss 54 on the burner head 28. This construction provides two points of support for the bracket at a considerable distance apart and in this way a strong support is given the chimney in its mounting upon the pipes.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. In a gas lamp, the combination of a chimney, a valve casing located outside of said chimney and provided with a valve, a gas supply pipe extending downwardly into the chimney and passing laterally through the side thereof and connected with said valve casing upon the exterior of the chimney, a burner and a gas delivery pipe connected with said burner and passing through the side of said chimney and connected with said valve casing to the exterior of the chimney, and a bracket secured to the interior of said chimney and provided with arms engaging said gas supply and delivery pipes respectively, substantially as described.

2. In a gas lamp, the combination of a chimney, a valve casing located outside of said chimney and provided with a valve, a gas supply pipe extending into the upper end of said chimney and passing through the side thereof and connected with said valve casing, a burner and a gas delivery pipe connected with said burner and passing through the side of said chimney and connected with said casing and being clamped to said chimney at the point thereof where said pipe passes through the chimney, and a bracket secured upon the interior of said chimney and attached to said gas delivery pipe and acting to hold the connected parts together, substantially as described.

3. In a gas lamp, the combination of a chimney, a valve casing located outside of said chimney and provided with a valve, a gas supply pipe extending into the upper end of said chimney and passing through the side thereof and connected with said valve casing, a burner and a gas delivery pipe connected with said burner and passing through the side of said chimney and connected with said valve casing, a projection upon said gas delivery pipe exterior to said chimney and bearing against the outside thereof, and a bracket secured to the interior of said chimney, substantially opposite the points where the gas supply and delivery pipes pass through said chimney and provided with horizontal arms engaging said gas supply and delivery pipes, respectively, and holding said parts together, substantially as described.

4. In a gas lamp, the combination of a gas supply pipe, a valve casing, a gas cock mounted in said valve casing and provided with a handle, a spring washer engaging said gas cock and having a bearing upon

the valve casing and provided with a perforation, a threaded pin mounted on said valve casing and projecting through the perforation in said washer, a threaded stop mounted on said pin and bearing upon said washer to regulate the tension thereon, the handle on said cock being adapted to engage said stop to limit the angular adjustment thereof, substantially as described.

5. In a gas lamp, the combination of a chimney, a gas supply pipe extending down into said chimney, a valve casing connected with said gas pipe and provided with a valve, a burner and a depending gas delivery pipe connected with and supporting said burner below said gas supply pipe, the said gas delivery pipe being connected with said valve chamber, and a supporting bracket secured within said chimney and provided with arms for engaging said gas supply and delivery pipes, respectively, and supporting said chimney, substantially as described.

6. In a gas lamp, the combination of a chimney, a gas supply pipe extending down into said chimney, a valve casing, pipe connections including an elbow pipe connecting said gas supply pipe and said valve casing, a burner and a depending gas delivery pipe connected with and supporting said burner and communicating with said valve casing, a supporting bracket secured within said chimney and having an arm connected with said elbow pipe section and another arm connected with said gas delivery pipe for supporting said chimney, substantially as described.

7. In a gas lamp, the combination of a chimney, a valve casing located outside of said chimney and provided with a valve, a gas supply pipe connected with said valve casing, a burner and a gas delivery pipe connected with said burner and extending through the side of said chimney and connected with said valve casing located outside of the chimney, said gas delivery pipe being secured to said chimney at the point where the pipe passes through the side of the chimney, and a bracket secured within said chimney and secured to said gas delivery pipe, substantially as described.

8. In a gas lamp, the combination of a chimney, a gas supply pipe extending down into said chimney, a valve casing with which said supply pipe is connected, a burner and a depending gas delivery pipe connected with and supporting said burner and communicating with said valve casing, a supporting bracket secured within said chimney and provided at its upper end with an arm engaging said gas supply pipe and provided at its lower end with another arm engaging said gas delivery pipe, and means for clamping the lower arm to the gas delivery pipe, substantially as described.

9. In a gas lamp, the combination of a gas supply pipe, a valve casing, a gas cock mounted in said valve casing and provided with a handle, a spring washer engaging said gas cock and having a bearing upon the valve casing and provided with a perforation, a threaded pin mounted on said valve casing and projecting through the perforation in said washer, and a threaded stop mounted on said pin and bearing upon said washer to regulate the tension thereon, substantially as described.

10. In a gas lamp, the combination of a chimney, a valve casing provided with a main duct and having a gas cock mounted therein and controlling said main duct, a cleaning opening in the side of said casing in axial alinement with said supply-pipe and giving access to the interior thereof, a removable plug for closing said cleaning opening, said plug also acting as a stop for limiting the angular movement of said gas-cock, a burner and a gas delivery pipe connected therewith and also with said casing, substantially as described.

11. In a gas lamp, the combination of a chimney, a valve casing provided with a main duct and having a gas cock mounted therein and controlling said main duct, a cleaning opening in the side of said casing in axial alinement with said supply-pipe

and giving access to the interior thereof, a removable plug for closing said cleaning opening and having its outer end threaded, a washer engaging said gas cock and having a lateral spring arm bearing upon said valve casing, a threaded member mounted upon the outer end of said plug and engaging said spring arm of the washer for regulating the tension thereon, a burner and a gas delivery pipe connected therewith and with said casing, substantially as described.

12. In a gas lamp, the combination of a valve casing having a gas-cock mounted therein, a gas supply pipe connected with said casing, a burner and a gas delivery pipe connected therewith and also with said casing, a washer for said gas cock having a lateral spring arm bearing upon a fixed point, and an adjustable member engaging said spring arm of the washer for regulating the tension thereon and also acting as a stop for the angular movement of said gas cock, substantially as described.

In testimony whereof, I have hereunto set my hand in the presence of the two subscribing witnesses.

HARRY RUBIN.

Witnesses:

WILLIS FOWLER,
HARRY PICKETT.