

No. 720,433.

PATENTED FEB. 10, 1903.

J. HUTCHINSON.
FIXTURE FOR INCANDESCENT GAS LIGHTS.

APPLICATION FILED APR. 23, 1901.

NO MODEL.

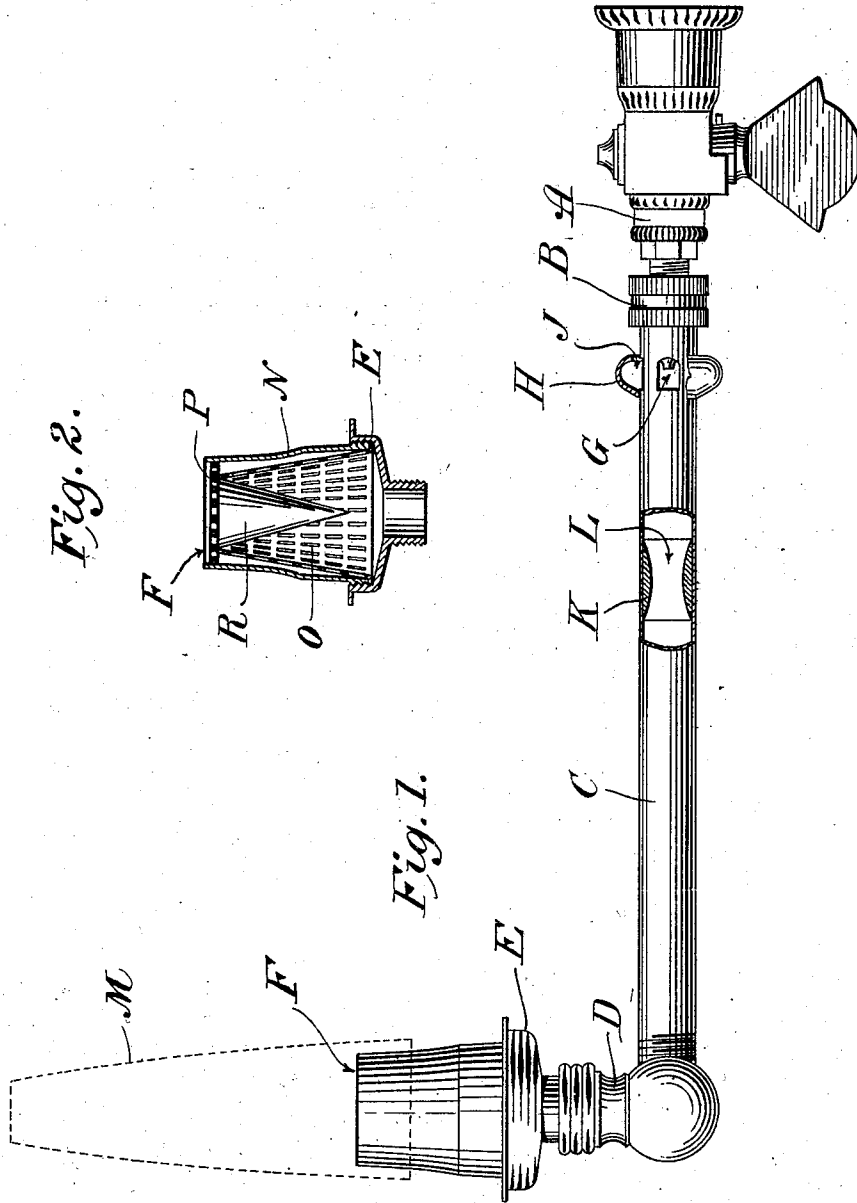


Fig. 2.

Fig. 1.

WITNESSES:

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FIXTURE FOR INCANDESCENT GAS-LIGHTS.

SPECIFICATION forming part of Letters Patent No. 720,433, dated February 10, 1903.

Application filed April 23, 1901. Serial No. 57,040. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HUTCHINSON, a citizen of the United States, residing at New York, county and State of New York, have invented certain new and useful Improvements in Fixtures for Incandescent Gas-Lights, of which the following is a full, clear, and exact description.

My invention relates to gas-fixtures, and particularly to those intended to be used in conjunction with incandescent mantles.

The objects are to provide a fixture-arm which may be most economically manufactured and which by improvements in construction hereinafter to be set forth insures a device of a simple and most efficient design.

Figure 1 is a vertical projection, partly in section, of a fixture embodying a simple form of my invention. Fig. 2 is a vertical section of my preferred burner-head.

A is an ordinary gas-cock adapted to be screwed onto a gas-pipe.

B is a gas tip or inlet of suitable form.

C is a fixture-arm which is threaded and secured to the gas-tip. At the other end a fitting D carries a burner-head E of well-constructed manufacture, preferably similar, for instance, to that shown in Fig. 2. The zone of flame occurs at F inside a mantle M, which is thus heated to incandescence.

G is an air-inlet in the fixture-arm C near the gas-tip B. Preferably there are several of these inlets arranged about the circumference.

H is a guard (shown partially in section) which may, if desired, be adjustable upon the arm. The air may enter the inlet G through the passage J under the edge of the guard.

K is preferably a ring of metal whose inner cross-sectional area L is substantially less than that of the interior of the fixture-arm. A contraction may, however, be formed in the arm in other ways.

I have found it advantageous to secure to this improved fixture-arm a burner-head, as shown in Fig. 2, in which N is a casing laterally surrounding a strainer O. Above this strainer is a disk P, having projections about the circumference, so as to leave a plurality of passages at the outer edge of the disk. A spreader R projects downwardly from the

disk into the interior of the strainer. This spreader serves to divert the mixture of gas and air outwardly, so that it passes out through the strainer. The casing then turns it upwardly and through the passages at the edge of the disk to the inside of the mantle. The burner-head and adjacent parts being heated by the flame an injector action is set up by means of which the air and gas which have entered by the inlet G and tip B, respectively, are drawn forward, mixed, and delivered to the mantle with the proper velocity. The contracted piece K when made separate from the arm may be adjusted in position to give the desired action of the burner.

The advantages of my new fixture are numerous. The correlation of the parts is such that the length of the arm necessary to put the mantle at a safe distance from the wall does at the same time provide a heat-radiating surface between the burner-head and the air-inlet which is sufficient to give the drop in temperature requisite for a good injector action.

The fixture has the appearance of an ordinary gas-bracket, and with it may be used a burner-head of simplified construction in which no air-valves are necessary. The height of the mantle is brought down to that of an ordinary light.

The fixtures may be manufactured in any design, the placing of the air-inlet in the arm making possible the use of a small and not inartistic burner-head. This feature is of particular value, for the design and effect of an expensive fixture of ordinary construction is often completely destroyed by placing upon it a burner of cumbersome and unsightly appearance.

I claim—

1. A gas-fixture comprising, a gas-tip, a fixture-arm, an air-inlet in said arm, an upturned burner-head, and a contracted passage in said arm at a point between said air-inlet and said burner-head.

2. A gas-fixture comprising, a gas-tip, a fixture-arm attached to said tip, an air-inlet in said arm, an upturned burner-head, and a contracted passage in said arm at a point between said air-inlet and said burner head.

3. In combination, a gas-cock, a gas-tip, a
fixture-arm, an air-inlet in said arm, an up-
turned burner-head, and a contracted passage
in said arm between the said air-inlet and the
5 said burner-head.

4. In combination, a gas-cock, a gas-tip, a
fixture-arm, an air-inlet in said arm, an up-
turned burner-head attached to said arm, and
a contracted passage in said arm between the
10 said air-inlet and the said burner-head.

5. An integral gas-fixture arm having
therein a gas-inlet and an air-inlet, and at-
tached thereto an upturned burner-head, the
said fixture-arm having a contracted passage

therein at a point located between said air-in- 15
let and said burner-head.

6. A gas-fixture comprising a horizontally-
positioned integral arm, a gas-tip, an air-in-
let in said arm, a burner-head and a conically- 20
contracted passage in said arm at a point situ-
ated between said air-inlet and said head.

Signed at New York, N. Y., this 22d day of
April, 1901.

JOSEPH HUTCHINSON.

Witnesses:

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