T. TRUDEAU.

Gas-Burner.

No. 167,713. Patented Sept. 14, 1875.

Fig. 1.

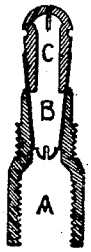

Fig. 2.

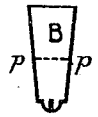

Fig. 3

Fig. 4

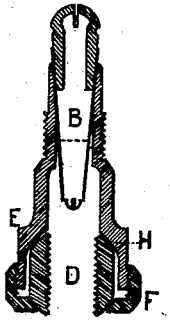

Fig. 5.

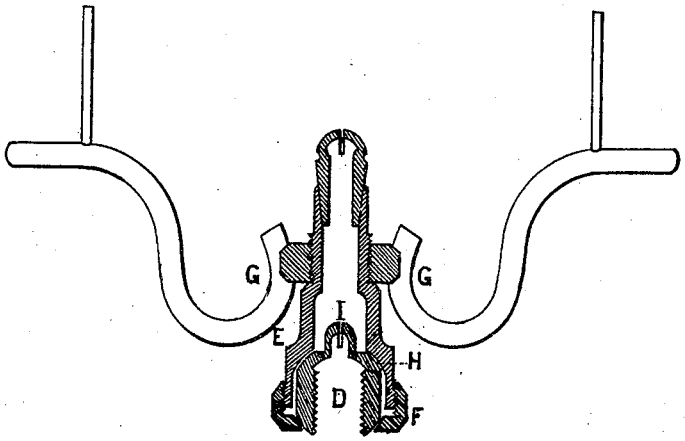

Fig. 6.

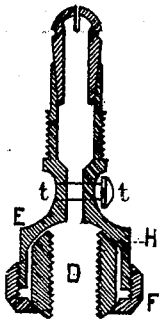

Fig. 7

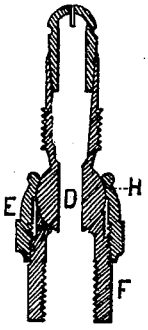

Fig. 8.

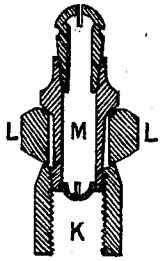

Fig. 9.

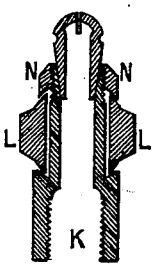

Fig. 10.

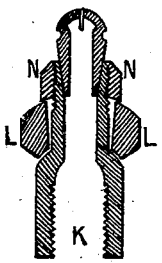

Fig. 11.

WITNESSES,

Hill & Dodge

Donn Twitchell

INVENTOR,

T. Trudeau,

by Dodger & Son,

Attys

UNITED STATES PATENT OFFICE.

TOUSSAINT TRUDEAU, OF OTTAWA, CANADA.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **167,713**, dated September 14, 1875; application filed May 22, 1875.

To all whom it may concern:

Be it known that I, TOUSSAINT TRUDEAU, of Ottawa, in the Province of Ontario, Dominion of Canada, have invented a Gas-Burner, of which the following is a specification:

The object of my invention is to provide a burner which will economically consume gas without noise, the parts of which regulating the supply can be easily placed in position and easily exchanged without disturbing the adjustment of the pillar or the gallery supporting the shade; further, to make the pillar or burner-holder adjustable, so that the gallery and shade can be adjusted horizontally and permanently secured in that position. In gas-pendants carelessly made it not unfrequently happens that the pipe holding the burner leans to one side, and that the gallery supporting the shade being rigid on the burner, the shade also falls to one side. My invention furnishes a simple remedy for this defect.

The invention is illustrated in detail by the accompanying drawings.

Figure 1 is a vertical section of an ordinary gas pillar and tip. Fig. 2 is a vertical section of one of my improved burners, ready for use, without the ball-and-socket adjustment.

A is the pillar; B, conical tube, with lower regulated opening; C, the tip.

Fig. 3 is a vertical section of conical tube B without the pillar or tip.

The tube is of thin metal, open at the top, with regulated opening below, formed of a slit or one or more perforations. The slit is preferable. This conical tube may be smooth and inserted in the pillar as a plug, or it may have a thread and be screwed into the pillar. For high pressures, a wire-gauze disk, *p p*, may be fitted above the lower orifice with the addition of a small quantity of wool.

Fig. 4 shows tube B with regulated opening below. It is fitted to the inside of the tip. Figs. 5, 6, and 7 are sections of my ball-and-socket gas-pillar, supporting the gallery and shade.

D is the ball; E F, the two pieces of pillar forming the socket; G G, the gallery; H, leather washer between ball and shell of pillar, to render the ball-and-socket joint gas-tight.

In Fig. 5 the tube B is inserted in pillar; in Fig. 6 the regulated opening I is through cap of ball; and in Fig. 7 the pressure of the gas is regulated by a small tap, *t t*.

Fig. 8 is another form of ball-and-socket pillar, in which D is the ball; E F, the two pieces forming the socket; and H, the leather washer.

In fitting pillars, Figs. 5, 6, 7, and 8, they are adjusted so that the gallery is placed perfectly horizontal, the pieces E F, forming the socket, are screwed together so as to press firmly on ball D. The joint between ball and socket may be filled with white lead. Thus any tendency to movement, after adjustment, is done away with.

Figs. 9, 10, 11, are modified forms of ball-and-socket pillars. In each K represents base of pillar; L L, adjustable center, which, in this case, is the center piece or hub of gallery.

In Fig. 9, M is tube, with or without regulated lower opening, which screws into base K. In Figs 10 and 11 the gallery is secured by nuts N N.

It will be observed that the combinations D E F, K L M, and K L N are equivalents of each other, and that so far as their functions and operation are concerned, they are essentially the same.

It will be evident that the ball-and-socket pillar may be fitted with any appliance designed to reduce the pressure of gas.

For general use I prefer the form of pillar shown by Fig. 5.

I do not claim as my invention the introduction of two separate orifices, one above the other, or the use of a tap, for the purpose of reducing the pressure of gas; neither do I claim the introduction of the wire-gauze disk and wool.

Having described my invention, what I claim is—

1. A gas-pillar, fitted with a ball-and-socket joint, for the horizontal adjustment of the gallery and shade, substantially as shown and described.

2. In a gas-burner, the combination of a re

movable tip, C, and a tube, B, attached to the tip and removable therewith.

3. The combination of the parts D E F, or their described equivalents, forming a gas-pillar, having a ball-and-socket joint to permit the horizontal adjustment of the gallery and shade.

4. A gas-burner, consisting of the parts D E F, or their described equivalents, and the removable tip C, with the tube B attached thereto, as shown, the construction permitting the gallery and shade to be adjusted horizontally, and the burner to be changed without affecting said adjustment.

T. TRUDEAU.

Witnesses:
H. LA PIERRE,
T. G. COURSOLLES.