E. COE.

GAS-BURNER.

No. 187,512. Patented Feb. 20, 1877.

fig 1

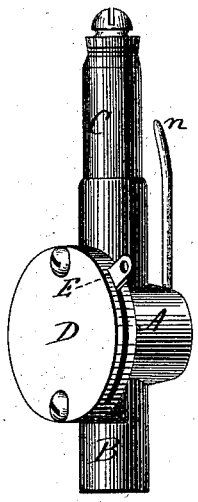
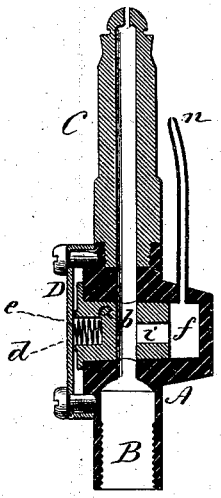


fig 2



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD COE, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE AMERICAN STREET LIGHTING COMPANY, OF SAME PLACE.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **187,512**, dated February 20, 1877; application filed February 2, 1877.

To all whom it may concern:

Be it known that I, EDWARD COE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Gas-Burners; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a perspective view; and in Fig. 2 a vertical central section.

This invention relates to an improvement in cocks for gas-burners, with special reference to street-lighting.

In the usual construction of gas-cocks a great difficulty is experienced, particularly in cold weather, from the fact that the plug becomes so coated as to stick and be exceedingly difficult, and often impossible, to turn until the plug be loosened.

The prime object of this invention is to overcome this difficulty, and also to construct a burner to be self-lighting; and the invention consists, first, in constructing the plug-seat closed at the smaller end, and combined with a spring at the opposite end, the tendency of which is to force the plug into its seat, but yet allow it to be easily started axially; and, secondly, in constructing the plug with a passage parallel with its axis, leading from the main passage to a chamber at the smaller end of the plug, combined with a small or auxiliary burner, taking its gas from the said chamber, all as more fully hereinafter described.

A is the shell of the cock, fitted at one end, B, for attachment to the pipe or fixture, and at the other to receive the burner C; *a*, the plug, which is of the usual taper form, and fits into a corresponding taper seat in the shell A. The shell is formed close at the smaller end of the seat, so that the smaller end of the plug is entirely inclosed by the shell. Through the plug an aperture, *b*, is formed, substantially in the usual manner. At the larger end of the plug a cavity, *d*, is formed, into which a suitable spring, *e*, is arranged, and this covered by a cap, D, so that the spring takes a bearing both on the plug and against the cap, the tendency of the spring being to force the plug into its seat; but yet will allow an outward axial movement to loosen the plug in case it should stick.

The plug is here represented as operated by means of a lever, E; but the method of turning the plug is not essential, though for street-lighting purposes the lever is desirable.

In order to make the burner self-lighting, the shell is so much longer than the plug as to form a chamber, *f*, at the smaller end of the plug, and from the principal passage *b* a second passage, *i*, is formed, which will conduct the gas at all times to the chamber *f*, giving a constant flow through that passage, and to the small auxiliary burner *n*.

The turning of the plug cuts off or opens the supply to the main burner, as the case may be. When the supply is opened the gas in the main burner is ignited from the auxiliary burner *n*, or when cut off the main burner will be extinguished, but the auxiliary burner still supplied.

In the usual construction of the plug to feed the auxiliary burner a small surface-groove or correspondingly-small passage of some character is formed leading to the auxiliary burner. This small passage in the plug is liable to be choked, and thereby defeat the object of the auxiliary or lighting burner.

By the construction in this invention a large passage is made through the plug, which, in connection with the chamber *f*, avoids this difficulty.

I claim—

1. The combination, in a gas-cock, of the taper plug with the shell having a corresponding taper-seat for the plug, and closed at its smaller diameter, and a spring applied at the larger end of the plug, substantially as described.

2. The combination of the taper plug, con-

structed with the principal passage at right angles to the axis, the auxiliary passage parallel to the axis and leading from the principal passage, the shell constructed with a chamber, to which the said auxiliary passage leads the gas, a principal burner opening from the principal passage, and an auxiliary burner opening from the said chamber, all substantially as and for the purpose described.

EDWARD COE.

Witnesses:
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