

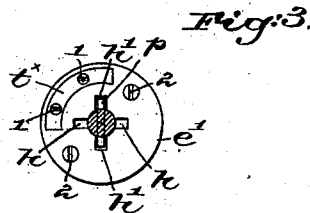
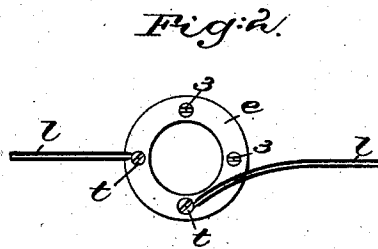
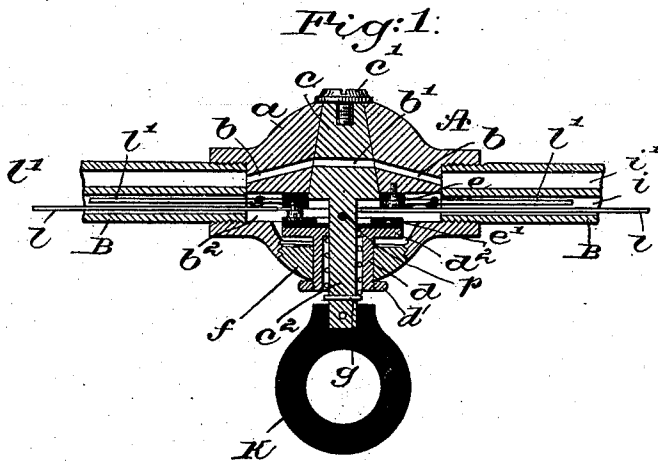
(No Model.)

J. A. O'NEILL.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

No. 503,912.

Patented Aug. 22, 1893.



witnesses.

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By Crosby & Gregory
Publishers.

UNITED STATES PATENT OFFICE.

JAMES A. O'NEILL, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JOHN C. HOLLINGS, OF SAME PLACE.

COMBINED GAS AND ELECTRIC-LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 503,912, dated August 22, 1893.

Application filed October 29, 1892. Serial No. 450,319. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. O'NEILL, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in a
5 Combined Gas and Electric-Light Fixture, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 Chandeliers and brackets for lights are now frequently provided with means whereby they may be used for either gas or electric lighting, and it is necessary to provide a coupling which is adapted to regulate the flow of
15 the gas or the electric current singly or jointly, and it is a great desideratum that such coupling should be simple in construction, easily applied, and efficient in its operation.

This invention has for its object the production of a combined gas and electric light fixture which includes a coupling consisting of few parts, and which is adapted to regulate the flow of either gas or electricity simultaneously or separately, and which may be readily taken apart and put together again without the employment of skilled labor when
25 mere cleaning is necessary, and which will present a neat and pleasing appearance to the eye, while being most efficient in operation.

30 Figure 1, in section, represents a coupling embodying my invention, the section being taken on a vertical plane extended longitudinally through the coupling. Fig. 2 is an under side view of one part of the circuit closer; and Fig. 3 is a top view partly in section showing the movable member of the circuit closer.

I have herein represented the coupling as composed of a casing A, preferably of cast metal having threaded side openings to receive the combined gas and wire conduits to be described, the said casing being cast with a solid portion *a*, through which extend the gas passages *b, b*, the lower portion of said casing being hollowed out as at *b*² to receive
40 the actuating parts of the coupling, access being had to said hollow or cored-out portion *b*² by means of the removable cap or closure *f*, preferably threaded, as shown in Fig. 1. The solid portion *a* of the coupling has, as herein
50 shown, a conical seat to receive the correspond-

ingly-shaped plug *c* of the gas cock having therethrough a gas passage *b'*, the said cock being held in place in usual manner by a screw *c'*. The shank *c*² of the gas cock is reduced in diameter and is surrounded by a sleeve *d*, 55 preferably flanged at one end as at *d*² to receive thereon an insulating plate *e'*, herein shown as secured thereto by screws 2, 2, said insulating plate as best shown in Fig. 3 having secured thereto a metal contact segment 60 *t*^x held in place by screws 1, 1, entering the insulating material *e'*, but not passing therethrough, thus insulating the contact segment from the sleeve. A pin or projection *g* is secured to the lower end of the shank, and between said shank and sleeve I have placed a 65 spring *s*, one end of the spring bearing upon said pin or projection and the other end bearing upon the inturned portion of the flange *d*², thus normally keeping the sleeve in its 70 raised position as shown in Fig. 1. As shown in Figs. 1 and 3, I have provided the insulating plate *e'* with diametrically-opposite recesses *h, h*, and *h', h'*, to co-operate with a pin *p* extended through the upper part of the 75 shank *c*² of the gas cock. The sleeve *d* and its attached insulation carrying the contact segment *t*^x, constitute the movable member of the circuit closer.

I have secured to the solid portion *a* of the 80 casing a preferably annular insulating plate *e* by screws 3, 3, and have secured the ends of the line wire *l* to terminals *t, t'*, said terminals projecting beyond the face of said ring *e*, as shown in Fig. 1, and adapted to be 85 brought in contact with the segment *t*^x at the proper time. The return wire *l'* passes around the insulation *e* and is extended through the wire receiving section *i* of the conduit B, the said section also receiving the wires *l*. The 90 insulating ring *e* and the contact terminals *t, t'*, constitute the fixed member of the circuit closer.

As shown in Fig. 1, the gas cock is turned in such manner that the passage *b'* therein 95 connects the gas passages *b, b*, of the coupling, and the flow of the gas through the section *i'* of the conduit B is unimpeded, and the contact segment *t*^x is in such position that both of the terminals bear upon the same, and 100

the electric circuit to the lamp is completed. By rotating the gas cock one quarter of a turn the gas is shut off and the electric circuit is opened by the corresponding movement of the segment t^x , it receiving its movement through the pin p and notches or recesses h' . Consequently it will be seen that the gas and electric current may be turned on or off simultaneously by the rotation of the gas cock in usual manner.

If it is desired to turn the gas on and the electric light off simultaneously, or vice versa, the movable member of the circuit closer is drawn down against the pressure of the spring s and given a quarter turn. This movement carries the contact segment t^x out of range of the two terminals, and consequently breaks the circuit, and the movable member is held in such turned position by the pin p entering the recesses h . When in this position, rotation of the cock will turn the gas on and the electricity off, or the electricity on and the gas off, as desired.

If it should be advisable to use the coupling for gas alone for any length of time, it is only necessary to turn the movable member of the circuit closer until the contact segment t^x assumes a position diametrically opposite to that shown in Fig. 3, when rotation of the gas cock will only affect the flow of the gas, the electric circuit remaining continuously broken.

Should it be desirable to use the coupling for electric light alone, the cock may be given a quarter turn from the position shown in Fig. 1 and the electric circuit opened and closed by rotation of the movable member of the circuit closer on the shank c^2 without turning the latter.

The sleeve d is supported by and free to rotate in the cap or closure f , and to permit its ready insertion therein I have shown in Fig. 1 as detachably secured to the lower end of said sleeve a threaded ring d' , said ring also constituting the hand-piece by which to alter the position of said sleeve with relation to the gas cock as has been described.

When it is desired to take the coupling apart for any purpose, such as for cleaning, it is only necessary to remove the screw c' from the end of the gas cock, and to unscrew the cap or closure f , which will bring with it the plug and the movable member of the circuit closer bodily, the opening in the insulating ring e being large enough to freely admit the conical end of the gas cock.

I have shown herein the conduits B as having two compartments or sections i and i' for the electric wires and gas respectively, the partition between the two sections being so located as to effectually prevent any escape of gas into the cored-out portion b^2 of the casing A , as said partition abuts against the solid part of the casing.

The insulating pieces e, e' , may be readily replaced when necessary, and the sleeve may

be removed from the closure f by unscrewing the ring or hand-piece d' , and the gas cock and sleeve may be separated when necessary by simply removing the pin g and the key k from the shank c^2 .

The screw c' may be provided with the usual notch to co-operate with the pin on the casing, to limit the amount of rotation of the gas cock, or such rotation may be limited in any other usual or well-known manner. The spring s constantly presses the sleeve d in an upward direction, so that one or the other pair of notches h or h' will engage the pin p .

I do not desire to restrict myself to the exact construction or arrangement of parts herein shown, as the same may be varied without departing from my invention.

I claim—

1. A coupling for gas and electric light fixtures comprising a casing provided with a gas passage and electric circuit wires, combined with a movable gas cock to co-operate with said passage, and a circuit closer carried by and movable independent of said cock, whereby the gas and the electric current are regulated independently, substantially as described.

2. A coupling for gas and electric light fixtures comprising a casing provided with a gas passage, and electric circuit wires, combined with a movable gas cock to co-operate with said passage, a circuit closer normally movable with said cock, and a detachable connection between said cock and circuit closer, whereby the gas and the electric current may be regulated simultaneously or independently, substantially as described.

3. In a combination gas and electric light fixture, a coupling provided with a gas passage, and terminals for the electric circuit within and insulated from the casing, combined with a gas cock supported in the casing, a circuit closer to co-operate with said terminals and normally movable with said cock, and means for disconnecting said cock and circuit closer, substantially as described.

4. In a combination gas and electric light fixture, a coupling having a gas passage and electric circuit terminals, combined with a gas cock, a circuit closer to co-operate with the said terminals and yieldingly supported on said gas cock, and a locking projection and recesses to normally connect said cock and closer to rotate together, substantially as described.

5. A coupling for gas and electric light fixtures comprising a partially hollow casing having a gas passage, a seat, and circuit terminals held in the hollow portion, combined with a gas cock held in said seat, a circuit closer longitudinally movable on the shank of said cock, and means to connect said cock and circuit closer to rotate in unison, substantially as described.

6. A coupling for gas and electric light fixtures comprising a partially hollow casing,

circuit terminals secured within and insulated from said casing, a circuit closer to cooperate therewith, and a closure for said casing in which the circuit closer is rotatably
5 and longitudinally movable, combined with means to rotate the circuit closer, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES A. O'NEILL.

Witnesses:

GEO. W. GREGORY,

JOHN C. EDWARDS.