

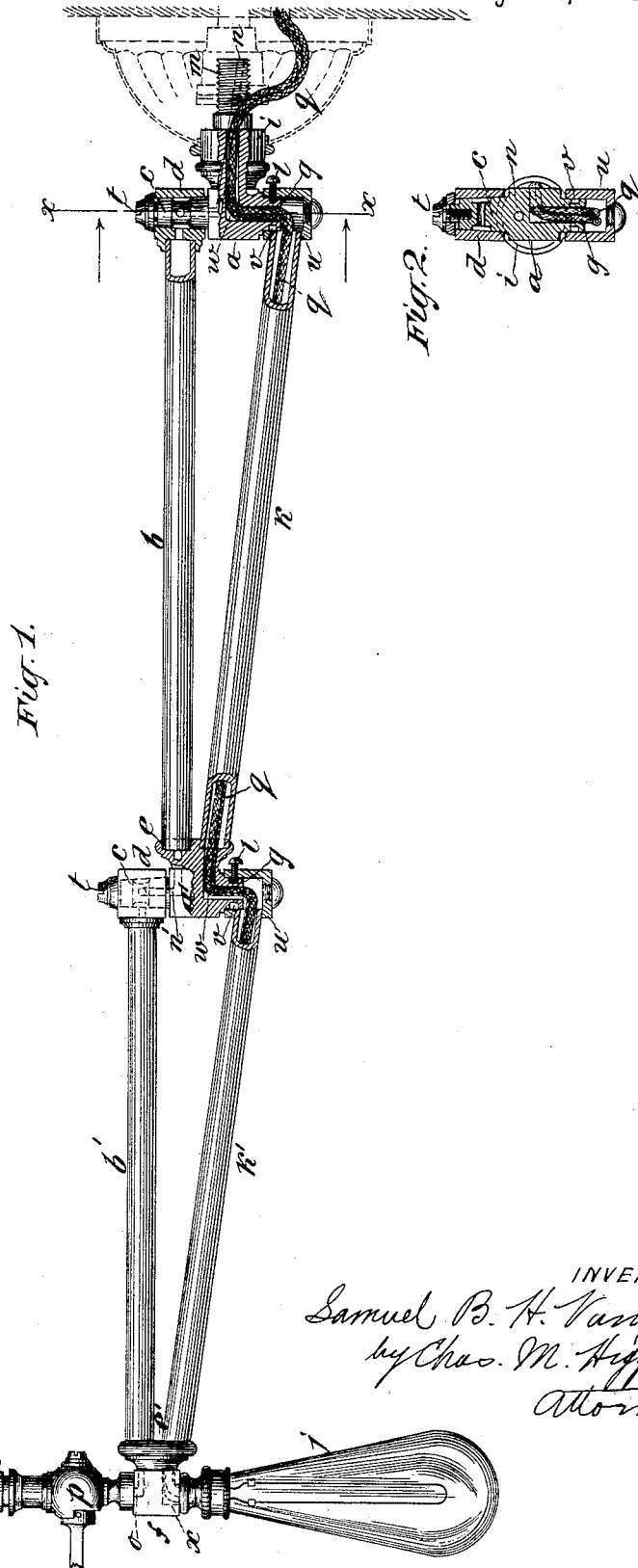
(No Model.)

S. B. H. VANCE.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

No. 383,158.

Patented May 22, 1888.



WITNESSES.

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COMBINED GAS AND ELECTRIC-LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 383,158, dated May 22, 1888.

Application filed January 31, 1887. Serial No. 235,975. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. H. VANCE, of the city, county, and State of New York, have invented certain new and useful Improvements in Combined Electric and Gas Fixtures, of which the following is a specification.

This invention relates to certain new and useful improvements in combined electric and gas fixtures; and it consists in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described and claimed.

In the drawings annexed, Figure 1 represents a complete elevation of my improved combined bracket, shown partly in section at the swing-joints. Fig. 2 is a cross-section on *x x*, viewed in the direction of the arrows.

Referring to Fig. 1, *a a'* indicate the main fittings of the swing-joints, and *b b'* the tubular sections of the bracket, which extend from joint to joint, as usual. The fittings *a a'* are formed, as usual, with the ground-plugs *c*, which fit gas tight into the ground-sockets *d*, secured to one end of the tubes *b*, the opposite end of which is screwed into a neck, *e*, on the side of the next joint-fitting, or into the terminal fitting, *f*, which supports the gas and electric lights, as shown. The ground plugs and sockets of the joints are substantially the same as in ordinary gas-brackets, except that they are placed in inverted position—that is, the plugs *c* project from the top of the fitting, with the socket *d* mounted therein, while from the bottom of the fitting a tubular neck, *g*, opens downward in axial line with the ground-plug *c*. Now, the first fitting, *a*, at the root end of the fixture, is formed with a large lateral neck, *i*, from the center of which projects a narrow nipple, *m*, which is coupled with the gas-pipe extending from the wall, as indicated by dotted lines, in the usual manner. A gas-way, *n*, (shown by dotted lines,) extends through this nipple *m* and the neck *i* into the body of the fitting, and communicates with a central bore in the plug *c*, from which a lateral bore opens into a groove on the plug, in the usual way, and by which the gas flows through the joint into the tube *b* to the next joint, and thence by the tube *b'* to the final fitting, *f*, where a right-angled passage, *o*, (shown by dotted lines,) leads to the gas-cock *p* and

burner *s*, in about the usual manner, the gas-passages of the joints being therefore substantially the same as is usual in ordinary swing-joints. The joints have, of course, also the usual washer and screws (shown at *t*) to hold the sockets properly on the plugs.

Now, *k* indicates the tubes in which the wires are conducted through the bracket from joint to joint, and which lie parallel to, or, rather, at a slight angle or convergent to the gas tubes. The front end of these tubes fit directly and snugly into sockets on the lateral necks *e e'* of the fittings *a'* and *f*, just below the gas tubes *b b'*, while the initial end of these tubes is provided with a cup or socket, *u*, which fits over the tubular necks *g* on the bottom of the fittings *a'*, and these necks have a circumferential groove, *v*, with which a set-screw, *l*, on the caps engages, thus holding the wire-tubes *k k* in firm position between the swing-joints, and yet permitting the wire-tubes to articulate or turn on the necks *g* coincident with the sockets *d* on the plugs *c*, as will be understood. Now, a right-angled wire-passage, *w*, extends through the lower part of the fitting *a'* via the tubular neck *g* and the lateral socket, into which the wire-pipe *k* connects, and a similar right-angled passage extends through the fitting *a*, which passage is continued backward through the large neck *m*, opening at the back of the same outside of the nipple *n*. The wires *g* thus enter the neck *m* of the first fitting *a* from the wall under the canopy, as shown by dotted lines, and passing through the right-angled passage described issue from the first tubular neck *g* into the cup *u* and thence pass through the tube *k* and through the right-angled passage in the next fitting *a'* into the next cup or tube, and, continuing through said tube, finally pass through a downwardly-turned right-angled passage, *x*, in the terminal fitting *f*, as shown by dotted lines, and thus connect to the electric lamp *j*. It will therefore be seen that this plan not only provides entirely distinct passages for gas and wires, but the construction is simple and the bracket is strengthened by the wire-tubes *k k*, which act as braces to the gas-tubes between the joints and at the same time improve the design and appearance of the bracket. It is

also easy to thread the wires through the bracket, as the passages are comparatively direct, and when the wire-tubes *k k* are detached, as they easily can be by loosening the screws *l*, the wires can be easily passed through from joint to joint, after which the wire-tubes can be put back in place, as shown in Fig. 1, thus protecting and entirely concealing the wires. As the wires are bent through the swing-joints just at the axial lines only, the bends lying loosely in the cups *u*, the wires are hence subjected to the least possible twisting or torsion caused by the motions of the joints.

The wire-tubes might be arranged in actual parallel with the gas-tubes; but it is preferred to arrange them in inclined steps, as shown, to allow of the right-angled bend or passage for the wires at each swing-joint between the tubes, as this subjects the wires to a less injurious bending strain than would otherwise be the case.

It will be readily understood that the positions of the tubular necks *g* and sockets *u* might be relatively reversed, the sockets being on the fittings and the necks on the tubes *k*, one being the equivalent of the other; but the arrangement as illustrated is preferred.

It may be understood that my improved arrangement of the wire-tubes and swing-joints is not necessarily confined to hollow-jointed gas-brackets for conducting gas parallel with the wires, as the fixture may be made for electric light alone, in which case the gas-passages in the upper half of the swing-joints and in the tubes or arms *b b'* may be dispensed with and these parts made solid simply to act as jointed sustainers for the wire-ducts.

What I claim is—

1. The combination, with a swing-jointed bracket having one set of jointed sustaining-arms, of tubular wire-necks on the swing-joints in axial line therewith, lateral wire-passages leading to said tubular wire-necks, and wire-tubes extending from joint to joint with one end having a detachable rotating connection with the axial wire-neck, while the other end connects to the lateral wire-passage of the next joint or fitting, substantially as set forth.

2. The combination, with a swing-joint gas-bracket having tubular necks projecting from the joint-fittings in line with the axis of the gas-joints, and a wireway opening on the side of the fitting into said tubular neck, of wire-tubes having at one end a cup or socket to fit over said tubular necks, or vice versa, and connected at the opposite end with the lateral wireway on the next fitting, substantially as set forth.

3. The combination, with a swing-joint gas-bracket having tubular necks projecting from the joint-fittings in line with the axis of the gas-joints, and a wireway opening on the side of the fitting into said tubular neck, of wire-tubes having at one end a cup or socket to fit over said tubular necks and connected at the opposite end with the lateral wireway on the next fitting, said neck being formed with circumferential groove, and a set-screw on the cup or socket engaging said groove, substantially as described.

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Witnesses:

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