To all whom it may concern:

Be it known that I, CHARLES S. STEINBERG, a citizen of the United States, and a resident of the city of New York, in the county and State of New York, have invented and useful Improvements in Combination Gas and Electric Fixtures, of which the following is a full, clear, and exact description.

My invention relates to improvements in combination gas and electric light fixtures of that class wherein a gas-pipe and electric-light wires are both housed or incased within a suitable envelop or external casing.

Prior to my invention it was common to provide "straight" electric fixtures or fixtures in which no provision is made for conducting gas to a burner with an insulating-tube inside of a casing, said tube serving as a housing for the electric conductors. It was also not new to provide a combination fixture consisting of an outside jacket, envelop, or casing, a gas-pipe therein, and conductor-wires extending through the casing. In many fixtures of this class now on the market no provision is made for the ready introduction of the wires and for their electrical insulation from other parts of the fixture, such as the gas-pipe and the external casing or jacket, in consequence of which the insulating-covering of the wires is liable to be cut or worn away by the sharp edges of the metallic parts during the operation of drawing the wires through the fixture, so that a short circuit is formed, which is likely to result in a fire or to seriously injure the fixture. This result may also be brought about in "fishing" the wires through small holes in the casing, and, again, a servant in cleaning or polishing a fixture often grasps the outside casing and turns it around, so that the wire-covering is chafed and worn away. Difficulty is also experienced in rewiring the fixture after it is burned out. Owing to the inaccessibility of the incased wires, when the fixture is suspended from a ceiling it is now the common practice to take down the ordinary fixture, carry it to a factory, and rewire it, thus entailing much loss of time, considerable expense, and depriving the occupant of the house of the light during repairs. In my new fixture these objections are wholly overcome.

From the foregoing it is to be gathered that I have in view in the present invention the production of a combination fixture wherein provision is made for mechanically and electrically insulating the conductor-wires from the gas-pipe and from the casing, so that the gas-pipe cannot operate as a ground connection, said fixture being rewired without removing it from the ceiling or other place on which it is installed. In my improved construction the fixture is equipped, in addition to the gas-pipe and the casing, with a tube which lies within the casing and alongside of the gas-pipe, said tube having its upper end bent or curved, so as to be easily accessible for the entrance and exit of wires without bringing them into engagement with the gas-pipe or the casing. This tube receives the conductors, so as to isolate them mechanically from the casing and the gas-pipe. It is provided at its ends with bushings of insulating material, so as to insulate the wires electrically from the parts, and the tube is so formed and arranged that the wires can be drawn through it easily and quickly, thus allowing the fixture to be rewired without removing it from the ceiling.

Reference is to be had to the accompanying drawings, forming part of this specification, in which like numerals of reference denote corresponding parts in all the figures.

Figure 1 is a view partly in side elevation and partly in vertical section. Fig. 2 is a horizontal cross-section through the stem of the fixture on an enlarged scale; and Fig. 3 is an enlarged detail view, partly in section and partly in elevation, of the insulating-tube and the conductor-wires passing through the same.

As shown, the fixture is equipped with a
stem in the form of an external casing or jacket 5, through which passes the gas-pipe 6, the upper end of which is united in a suitable way by a coupling or union to the supply-pipe 7.

9. The hollow stem 5 of the fixture is equipped at its lower end with a center piece, from which extends one or more hollow arms 7, said center piece being of ordinary form and having a lower member 8, secured in a suitable way thereto. Through each hollow arm 7 of the fixture extends a branch 6" of the gas-pipe 6, each branch being provided with any suitable kind of burner 6", as ordinary in the art.

15. The gas-pipe 6 serves to suspend the casing or stem 5 and the other parts of the fixture from the ceiling, and this casing is equipped at its upper end with a canopy 10, the latter being clamped in place by a set-screw, as shown by Fig. 1, so that the canopy may be lowered on the stem for easy access to the gas-pipe coupling and the other parts of the combination fixture to which the gas-pipe is connected.

As usual in the art, the electric conductors 12 are housed in a pipe 11, which has an angular end portion adapted to extend into the space of the canopy 10 alongside the gas-pipe 6; but instead of carrying the wires 18 through the casing or hollow stem 5, so as to have engagement with the gas-pipe or the casing, I provide the fixture with means for receiving and holding the wires, said means affording a channel or passage separate from the casing and keeping the wires free from the gas-pipe.

In the embodiment illustrated the wires 18 are housed in an insulating-tube 14, which is straight throughout its length except at the upper end, where the tube is bent or curved sidewise, as indicated at 15. The tube 14 is arranged inside of the casing or stem 5 to be alongside the gas-pipe, substantially parallel thereto, and said tube is supported within the fixture in a suitable way, as by attaching or fitting it to the casing 5 or by securing it to that part 8 of the gas-pipe which is housed in the casing, the tube 14 constituting an invisible and integral part of the fixture.

The tube has its lower end extended into the chamber of the center piece, while the upper bent end 15 of the tube is fitted in a lateral opening provided in that upper part of the casing 5 which is extended into the canopy 10, whereby the end portion 15 of the tube is made accessible to the workman in repairing the fixture when the canopy 10 is lowered, thus allowing the wires 18 to be drawn from the pipe 11 and passed downwardly through the tube 14 in the operation of rewiring the fixture. Said tube 14 may be made of any suitable material; but when made of metal I contemplate the use of insulating-tips 16 at the lower end and the upper bent end 15 of the tube. Each tip is made of suitable insulating material and with a flange 17, the latter being disposed to have engagement with the end of the tube in order to effectually hold the wires from engagement with the tube itself. These tips allow the wires to easily pass through them, and they keep the wires from metallic engagement with the tube at the end portions thereof.

In each hollow arm 7 of the fixture is arranged a horizontal conductor-tube 19, from the outer end of which a lamp 18 may be suspended. This tube 19 has its inner end portion fitted in the chamber of the center piece 8 and provided with an insulating-tip 20, the latter being similar to the tip 16. The inner end of the tube 19 is adjacent to the lower end of the vertical insulating-tube 14 and lies inside the stem of the fixture, thus allowing the wires 18 to be easily carried from one insulating-tube to the other.

From the foregoing description, taken in connection with the drawings, it will be seen that I provide a combination fixture wherein the conductor-wires cannot possibly come into engagement with the casing so that a short circuit may be formed, thus making the fixture practically fire-proof. Furthermore, the employment of a straight tube and its arrangement alongside of the gas-pipe for the end portions of the tube to extend into the canopy and the center piece makes provision for readily wiring the fixture on its installation or for rewiring the fixture should the conductors burn out by any possibility, because the canopy can be lowered and the bottom 8 of the center piece can be removed, thus exposing both end portions of the insulating-tube.

The fixture of my invention fulfills a want in this particular trade, because prior fixtures are open to the serious objections heretofore noted, and the structure is simple, compact, and cheap.

What I claim as new is—

1. A combination fixture wherein a gas-pipe is housed in a casing, said fixture having a tube arranged to house conductor-wires from contact with said gas-pipe, and a canopy clamped adjustable to the upper portion of the casing, the end portions of the tube being open for ready access in passing the wires through said tube, and the upper end of said tube being extended laterally beyond the casing and into the canopy.

2. A combination fixture wherein a gas-pipe is housed in a casing, said fixture having a canopy clamped adjustable to the casing, and a tube alongside of the gas-pipe and having a bent end extended to one side of the casing and into the chamber of the canopy.

3. A combination fixture wherein a gas-pipe is housed in a casing, the combination with a canopy fitted adjustable on said casing, of a tube having its upper end extended outside of the casing and into the space of the canopy, the latter being adjustable relatively to the extended end of said tube.
4. A combination fixture having a hollow stem, an arm, a center piece uniting the arm and stem, a gas-pipe extending continuously through the stem, arm and the center piece, and insulating-tubes within the stem and the arm thereof, the adjacent open ends of said tubes terminating within the center piece and providing for ready access to the conductors which are arranged to pass from one tube to the other.

5. A combination gas and electric fixture, comprising a hollow stem and a hollow arm united by a center piece, a continuous gas-pipe located in said stem and its arm, and separate conductor insulating-tubes supported within said stem and its hollow arm and disposed adjacent to the gas-pipe therein, the adjacent ends of the insulating-tube being separated within the center piece, and each tube having an insulating-tip at the respective ends thereof.

6. A combination gas and electric fixture comprising a hollow stem and a hollow arm united by a center piece, a continuous gas-pipe within said stem and its arm, a canopy clamped to the upper part of the stem, and a conductor insulating-tube disposed within said stem and provided at its respective ends with insulating-tips, said end portions of the tube being extended beyond the stem into the canopy and the center piece.

7. A combination gas and electric fixture, comprising a hollow stem having a hollow arm, a continuous pipe within said stem, and a conductor insulating-tube disposed within said stem, one end of said tube being deflected laterally, and the open ends of the tube being provided with insulating tips or bushings.

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

CHARLES S. STEINBERG.

Witnesses:

ELBERT BRUSSEL,
CHARLES ALVIN ROGERS.