

(No Model.)

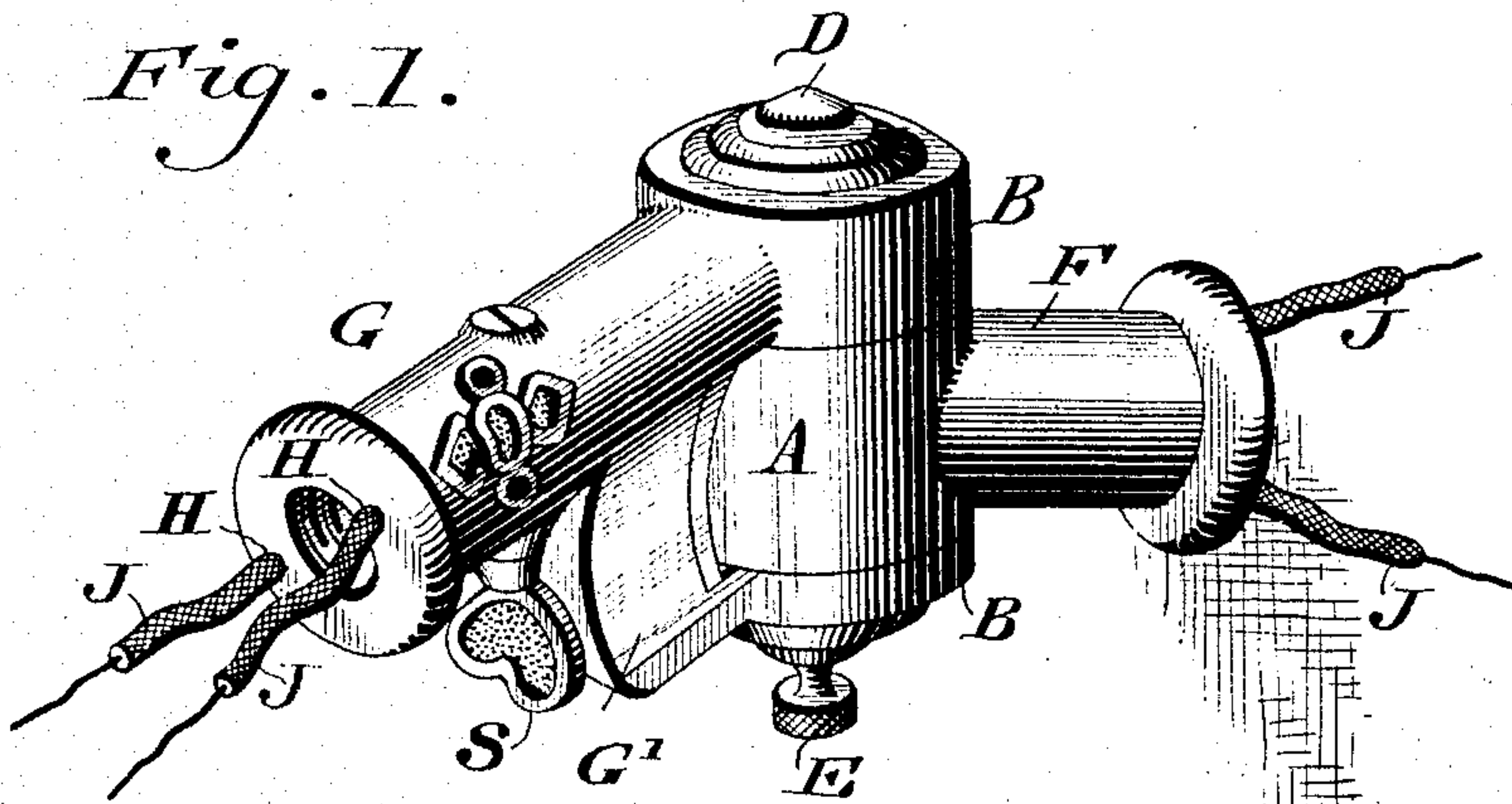
F. X. GARTLAND.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

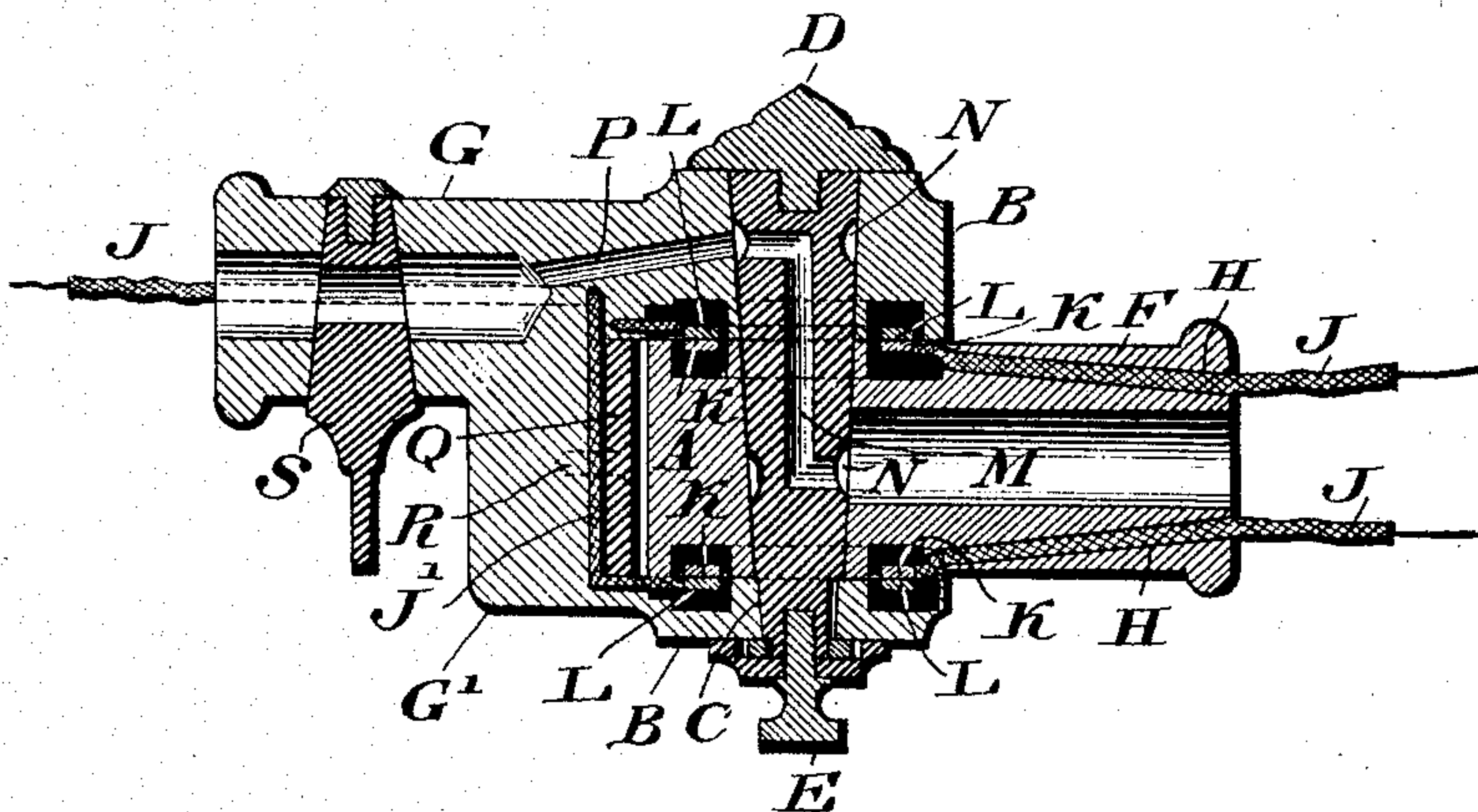
No. 490,903.

Patented Jan. 31, 1893.

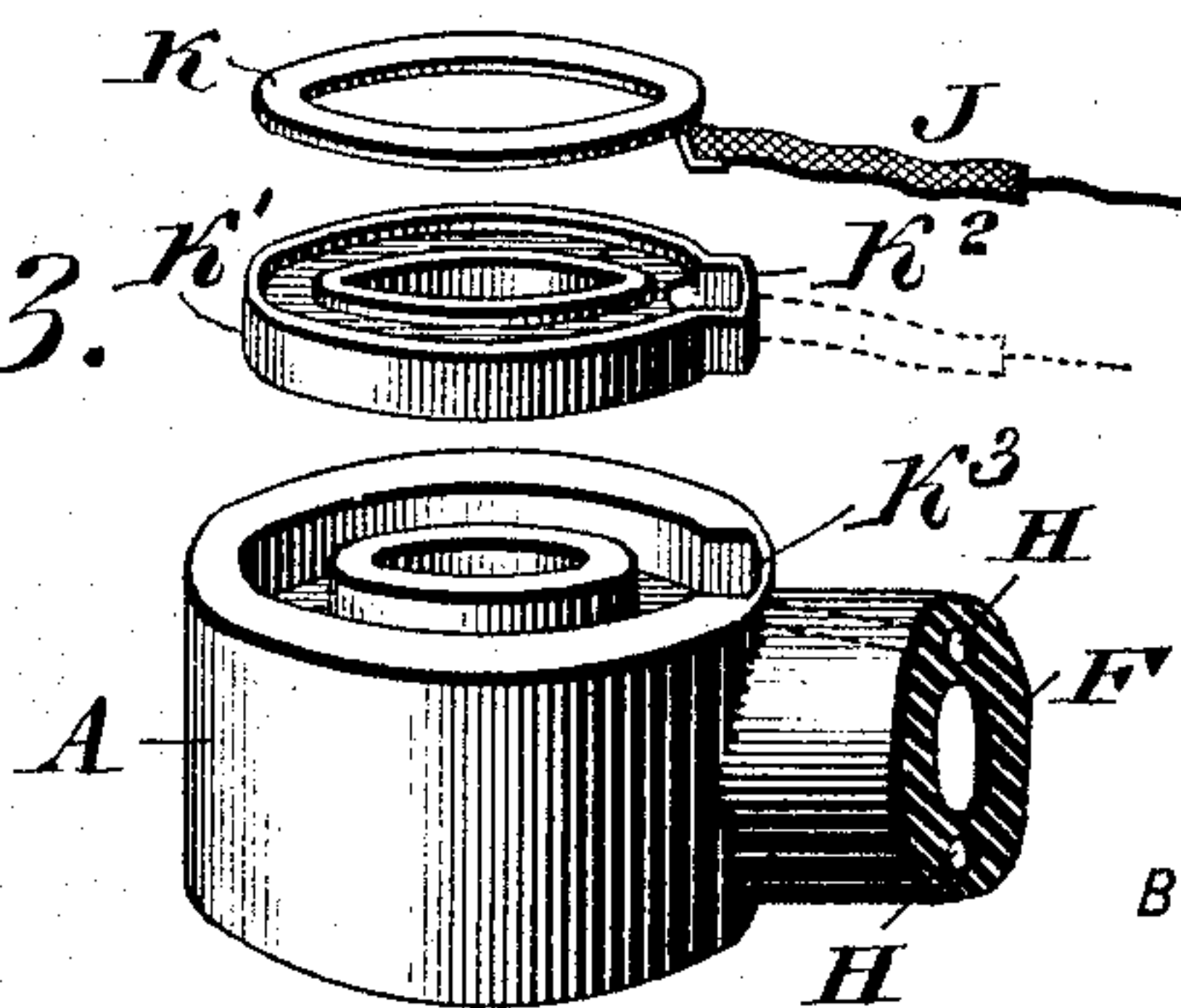
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 490,903, dated January 31, 1893.

Application filed January 23, 1892. Serial No. 419,045. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS X. GARTLAND, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Couplings for Electric and Gas Conductors, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a coupling for electric and gas conductors having an interlocking plug between its knuckles, contact rings insulated in said knuckles and pipes having openings for the conductors and connected with said knuckles, the plug having a bore with openings on opposite sides and communicating with the said pipes.

It further consists of the combination of parts hereinafter set forth.

Figure 1 represents a perspective view of a conductor embodying my invention. Fig. 2 represents a longitudinal section thereof. Fig. 3 represents a perspective view of detached portions thereof.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings:—A and B designate the knuckles of a coupling, the knuckle A being between the collars of the knuckle B, said knuckles being connected by a conical plug C, which is retained in position by the cap D at one end, and the screw E and a suitable washer at the other end. The knuckle A is provided with a branch pipe F, and the knuckle B with a branch pipe G, and an arm G', each branch having in its wall the openings H, H, for the passage of the electric conductors J, J. In the ends of the knuckle A, are contact rings K, which are in contact with contact rings L located within the collars of the knuckle B, said contact rings K, L, being suitably insulated from the knuckles and having the conductors J connected with them as follows:—The conductors in the branch F lead to and are connected with the contact rings in the knuckle A. The conductors in the branch G, lead from and are connected with the contact rings in the knuckle B. The plug C, has a bore M which opens in opposite places, and recesses N around the periphery of the plug communicating with the ends of said bore. One of the recesses com-

municates with the bore of the branch F, and the other recess communicates with a bore P, in the upper collar of the knuckle B, said bore communicating with the bore of the branch G, it being seen that gas is admitted into the branch G, passes through the bore P, and is thus directed into the bore M from whence it enters the bore of the branch F, by which it is conveyed to the fixture or attachment. Should the knuckles be turned from the right line shown in Fig. 2, the gas is not cut off, as the recesses N form the communication for the bore P with the bore M, and that of the bore M with the bore of the branch F.

In the arm G' which connects the collars of the knuckle B, there is a channel, to permit the portion J' of the conductor J therein to pass from the contact ring in the lower collar of the knuckle B to the proper opening H in said branch G, said portion J' being covered by a plate Q, on the inner side of the arm G', and said plate being secured thereto by means of a screw R. The plate is accessible when the knuckle A is removed from the knuckle B, and may be detached, thus uncovering the portion J' of the conductor, for purpose of application, removal or repairs. It will be seen that when the knuckles are turned so as to change the direction of the conductors, the contact rings K and L always remain in contact, thus maintaining the electric circuit and the conductors are not twisted or strained. The branch is provided with a gas key S, for cutting off and letting on the gas, as is evident. The insulating material for the contact rings K in the knuckle, is in the form of grooved disks K', to receive said contact rings, the same being provided with tongues K<sup>2</sup>, which enter grooves K<sup>3</sup> in said knuckle, and engage with the walls thereof, whereby twisting or turning of said contact rings, and consequent breaking or disconnection of the conductors J is prevented when the knuckles are rotated, it being evident that the disks, contact rings and conductors move as one with the knuckle A.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A coupling for electric conductors consisting of knuckles with an interlocking plug, contact rings insulated in said knuckles, and



pipes connected with said knuckles and provided with openings for the electric conductors, said plug having a bore opening on opposite sides of the plug and communicating  
5 with the bores of the pipes, said parts being combined substantially as described.

2. A coupling for electric conductors consisting of knuckles with an interlocking plug, insulated contact rings in said knuckles,  
10 pipes connected with each of said knuckles having openings therein, electric conductors in the openings in each knuckle leading to the contact rings in the said knuckle, and an  
15 arm on one of said knuckles having a passage for a portion of an electric conductor from its contact ring to the opening in the pipe, said parts being combined substantially as described.

3. A coupling for electric conductors having knuckles with an interlocking plug, insulated rings in said knuckles, electric conductors connected with said rings and pipes  
20 connected with said knuckles having openings for said conductors, the bore of said plug having openings on opposite sides in periph-

eral recesses of said plug, and communicating with the bores of the said pipes, said parts being combined substantially as described.

4. A coupling for electric conductors having knuckles with grooves therein, an interlocking plug, contact rings in said knuckles, 30  
insulating grooved disks receiving said rings and having tongues entering said grooves in the knuckles, and engaging with the walls thereof, and pipes connected with said  
35 knuckles, said parts being combined substantially as described.

5. A coupling for electric conductors having knuckles with an interlocking plug, contact rings in insulating disks in said knuckles, 40  
pipes on said knuckles provided with openings for the conductor, said plug having a bore opening on different sides thereof, said parts being combined substantially as described.

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Witnesses:

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