(No Model.)

J. GUNN.

BRACKET FOR COMBINED ELECTRIC AND GAS LIGHTING.

No. 442,666. Patented Dec. 16, 1890.

Fig. 1.

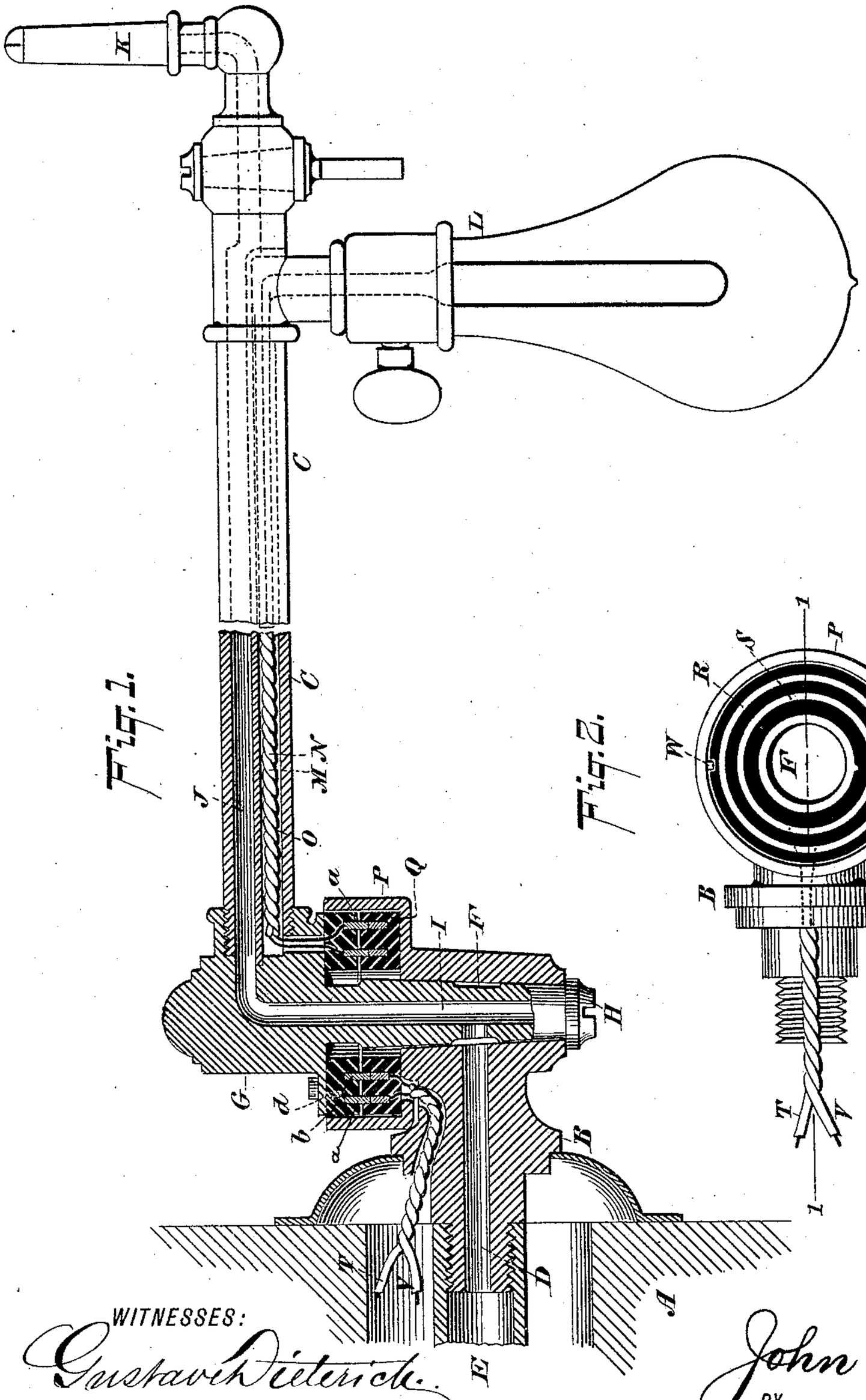

Fig. 2.

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BRACKET FOR COMBINED ELECTRIC AND GAS LIGHTING.

SPECIFICATION forming part of Letters Patent No. 442,666, dated December 16, 1890.

Application filed March 12, 1890. Serial No. 343,584. (No model.)

To all whom it may concern:

Be it known that I, JOHN GUNN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Brackets for Combined Electric and Gas Lighting, of which the following is a specification.

The invention relates to improvements in brackets for combined electric and gas lighting, and it pertains particularly to the construction of the joint by which the bracket may be turned in any desired direction, so as to bring the light at the point where it is most needed; and said invention consists in the construction and arrangement of devices hereinafter described and claimed.

The object of the invention is to provide a joint for the combined electric and gas brackets which will permit the arm of the bracket to be freely turned in either direction or to make a complete revolution without twisting the wires of the electric circuit or breaking said circuit.

The invention will be more fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a combined electric and gas lighting bracket constructed in accordance with the invention; Fig. 2, a top view of the lower section of the joint, permitting the movement in the arm of the bracket, and representing by a dotted line 1 1 the section on which Fig. 1 is made.

In the drawings, A represents the wall or support, to which the stationary arm B may be secured in the customary manner. The arm B constitutes the support for the swinging arm C, and is provided with the aperture D, communicating with the gas-pipe E, the said aperture D being at right angles to and communicating with the vertical opening F, the walls of which constitute the seat for the rotary plug G, said plug being secured therein in the customary manner by a screw H and carrying the aforesaid swinging arm C. The plug G is provided with the vertical opening I, which is in communication with the opening D and gas-pipe E, and also with the upper division J of the swinging bracket-arm C. The arm C has at its outer end the gas-burner K, which is in line with the upper division J of the bracket-arm, and upon the lower side of the outer portion of the arm C is applied the usual electric lamp L, whose wires M N are properly insulated and inclosed within the lower division O of the said bracket-arm C.

Upon the arm B is formed the casing P, which is cylindrical in outline and incloses the disk of hard rubber or other insulating material Q, in which are seated the concentric metallic rings R S, which at their lower edge are electrically connected with the wires T V, as indicated in Fig. 1. The disk Q is seated in the casing P, and is prevented from rotating therein by pins or studs W, connected with the casing P and engaging vertical grooves in the sides of said disk, as represented in Fig. 2. The upper edge of the concentric rings R S is slightly below the horizontal plane of the upper surfaces of the disk Q, and hence there are left in said disk above the said concentric rings R S concentric grooves, the purpose of which is to receive the lower edge of the concentric rings *a b*, secured in the disk *d*, of insulating material, connected with the plug G and corresponding in outline and general characteristics with the disk Q, above described. The concentric metallic rings *a b* correspond in size with the similar rings R S, secured in the disk Q, and rest upon the same when the disks *d* Q are in face-to-face contact. The concentric rings *a b* are respectively electrically connected with the wires M N, which pass from said rings to the electric lamp L. The plug G carries the disk *d*, and the walls of the casing P inclose the sides of said disk when the plug is in position within the opening F in the arm B. I prefer to so arrange the concentric rings *a b* that when they are in contact at their lower edge with the upper edge of the rings R S a slight space will be formed between the disks *d* Q, of insulating material, as shown in Fig. 1. It will be observed that the casing P and disk Q are carried by the arm B, and that the disk *d* is carried by the plug G, so that when it is desired to connect the parts it is simply necessary to introduce

the plug G into the opening F and there secure it by the screw H in the customary manner, thus bringing the surfaces of the concentric rings *a b* and R S into contact with each other and establishing an electric circuit through the wires T V and said concentric rings and wires M N.

The essence of the invention lies in the construction of the joint as described and claimed, which permits the bracket-arm C to be revolved constantly in one direction or back and forth in either direction without twisting the electric wires and without breaking the electric circuit, and this object is accomplished by means of the rings R S and *a b*, seated in disks *d* Q, of insulating material, and adapted to revolve one upon the other, one side of said rings being connected with the wires T V, leading from the battery, and the other side with the wires M N, carried by the swinging arm. It will be noted that whether the arm C is revolved completely around or turned in either direction the rings *a b* will remain in electric contact with the concentric rings R S and retain the electric circuit. It is to be noted that neither the wires T V nor M N are in a position to affect or be affected by the gas. The wires T V pass to the rings R S through a groove specially provided for them in the arm B above the aperture D, for gas, and the wires M N pass from the rings *a b* into the lower division O of the bracket C.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arm B, connected with the gas-pipe and containing the aperture D and opening F, the disk Q, of insulating material, carried by said arm and encircling said opening, and the concentric rings R S, embedded in said disk, combined with the rotary plug G, inserted in said opening, the disk *d*, of insulating material, secured to said plug, the concentric rings *a b*, embedded in said disk *d* and having their lower edges in contact with the upper edges of the corresponding rings R S, the lamp and gas bracket-arm C, containing the separate divisions J O, the wires M N, passing from the rings *a b* into the said division O, and the wires T V, passing to the rings R S, the said plug G being the means of communication for gas from the aperture D to the division J of the bracket-arm, substantially as and for the purposes set forth.

2. The arm B, connected with the gas-pipe and containing the aperture D and opening F, the casing P on said arm, the stationary disk Q, of insulating material, within said casing, and the concentric rings R S, embedded in said disk, combined with the rotary plug G, inserted through said disk and into said opening F, the disk *d*, of insulating material, secured to said plug and entering said casing P, the concentric rings *a b*, embedded in said disk *d* and having their lower edges in contact with the upper edges of the corresponding rings R S, the lamp and gas bracket-arm C, containing the separate divisions J O, the wires M N, passing from the rings *a b* into the said division O, and the wires T V, passing outside of the aperture D to the rings R S, the said plug G being the means of communication for gas from the aperture D to the division J of the bracket-arm, substantially as and for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 1st day of March, A. D. 1890.

JOHN GUNN.

Witnesses:
CHAS. C. GILL,
ED. D. MILLER.