(No Model.)

H. M. DOUBLEDAY.

ELECTRIC LIGHTING SYSTEM.

No. 489,526. Patented Jan. 10, 1893.

Fig. 2.

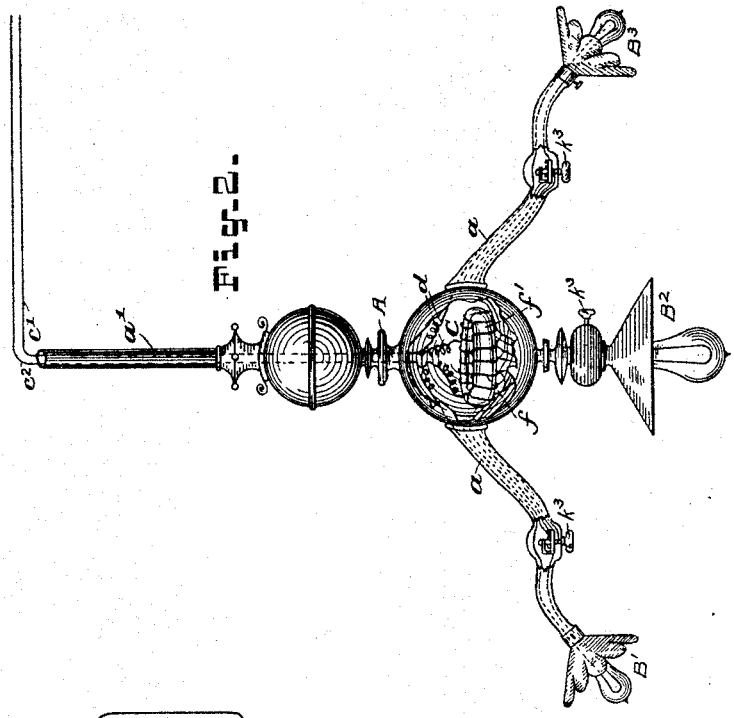


Fig. 3.

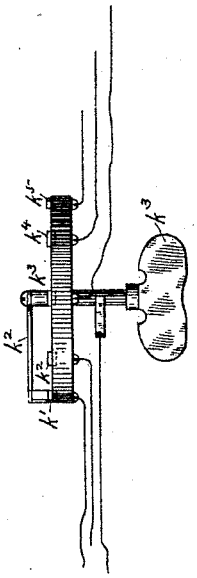
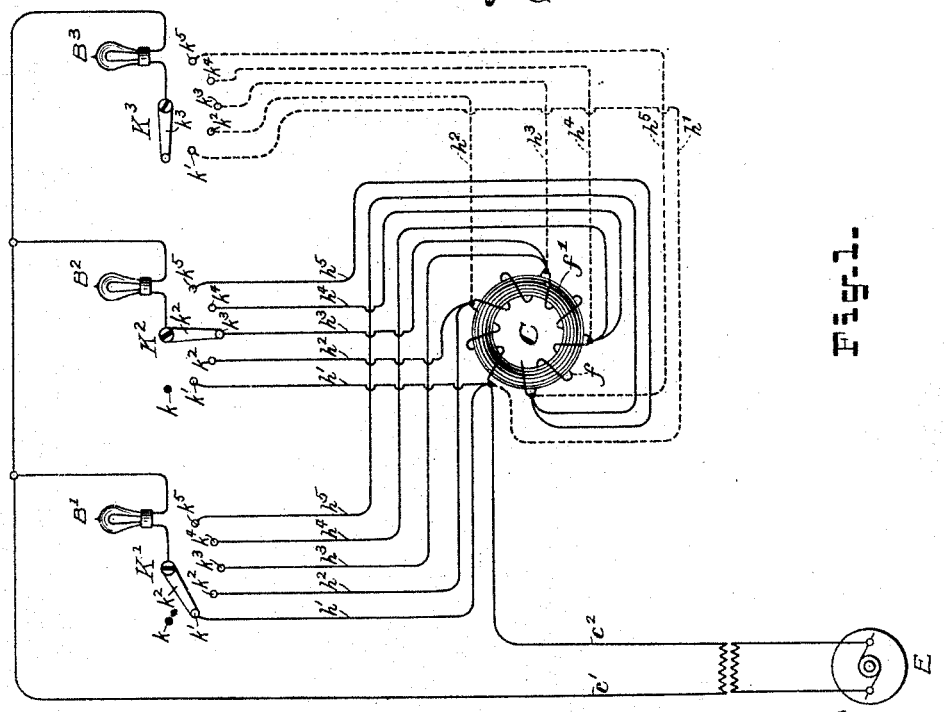


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY M. DOUBLEDAY, OF PITTSBURG, PENNSYLVANIA.

ELECTRIC-LIGHTING SYSTEM.

SPECIFICATION forming part of Letters Patent No. 489,526, dated January 10, 1893.

Application filed April 21, 1892. Serial No. 430,066. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. DOUBLEDAY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Regulating the Brilliancy of Electric Lamps, of which the following is a specification.

My invention relates to the construction of apparatus for regulating the brilliancy of incandescent electric lamps. It has been customary to employ adjustable reactive coils for introducing a variable amount of counter electro-motive force in the circuits supplying electric lamps and other translating devices with alternating electric currents.

My invention relates particularly to a special arrangement of circuits and apparatus employing an adjustable reactive coil.

It frequently happens that it is desirable to turn down or lessen the brilliancy of one or more of the lamps upon a chandelier or in a group of lamps, while others are either burning at their full brilliancy or are turned out. It is expensive to provide an adjustable reactive coil for each such lamp, and my invention consists in providing a single reactive coil for two or more such lamps and equipping each lamp with an adjusting device for including more or less of the reactive coil in its circuit independently of the other lamps. To this end a reactive coil may be contained in the base or other suitable portion of the chandelier and conductors led from different points therein to the several contact-points of the keys or switches of the respective lamps. By means of these keys or switches one terminal of the corresponding lamp may be connected through a greater or less length of the reactive coil, while the other end is connected directly with the source of current.

In the accompanying drawings Figure 1 is a diagram illustrating the organization of circuits. Fig. 2 is an elevation partly in section of an electric light chandelier equipped with apparatus for carrying out the invention. Fig. 3 is a detail.

Referring to the figures, A represents the frame of a chandelier and B', B^2, B^3, incandescent electric lights carried thereby. A reactive coil C is placed in the base or other suitable portion of the chandelier. In the drawing Fig. 2, I have shown the reactive coil as placed in the portion directly supporting the branching arms a, a. Two electric conductors c', c^2, lead from a source E of alternating electric currents. These conductors may pass down the supporting tube a' of the chandelier, one of the conductors c' branches into other conductors d' leading to one terminal of the respective lamps. The other conductor c^2 is connected with one terminal of a reactive coil C. This reactive coil is formed in any well known convenient manner, as for instance by winding an insulated conductor f about a soft iron core f', the core being preferably laminated. From different points in the length of the conductor f there are led out conductors h', h^2, h^3, h^4, h^5. These latter conductors in turn branch to the switch-devices K', K^2, K^3, of the different incandescent lamps. Each switch device is provided with a series of contact-points k' respectively connected through the branch conductors with the conductors h', h^2, &c., respectively. A contact arm k^2 operated by a key k^3 sweeps over the corresponding contact plates, and it is itself connected with the remaining terminal of the corresponding lamp. It will be understood from the foregoing that any or all of the lamps may be connected in circuit through more or less of the reactive coil and thus any lamp may be turned up or down irrespective of the others.

To provide for turning out the lamps when desired the switches are constructed so that the contact brushes may be turned to an insulated point k. The point k' connected with the conductor h' serves to connect the lamps in circuit without including any of the reactive coil. The number of contact points may be varied, a sufficient number being provided for effecting the required gradation in the brilliancy of the lamps.

In the drawings I have shown the switch devices as located in the respective arms a at about the points usually occupied by gas cocks in gas chandeliers, but they may be placed at any other desired point, as for instance in the sockets of the lamps.

I claim as my invention:—

1. The combination with an electric lamp chandelier or fixture, of a reactive coil carried thereby and two or more incandescent

electric lamps, multiple-point switch devices for the respective lamps, and circuit connections from the respective contact-points of the switches with different points in the length of the reactive coil.

2. The combination of two or more incandescent electric lamps, an adjustable reactive coil, conductors leading therefrom to the respective lamps and an adjusting switch device interposed in each of said conductors between the respective lamps and the reactive device.

3. The combination of a reactive coil, multiple conductors led from various points in the length thereof, incandescent electric lamps and independent switches for connecting each of such lamps with the various conductors.

4. The combination of an electric light chandelier, two or more electric lamps carried thereby, a reactive coil located in the base thereof, and an adjustable switch for each such lamp located in the arms of the chandelier and having contact points connected with the reactive coil.

5. The combination with a source of alternating currents, of a reactive coil, two or more incandescent electric lamps or other translating devices and an adjustable switch for each lamp for connecting the same in circuit through more or less of the reactive coil.

In testimony whereof I have hereunto subscribed my name this 12th day of April, A. D. 1892.

HARRY M. DOUBLEDAY.

Witnesses:
CHARLES A. TERRY,
H. C. TENER.