

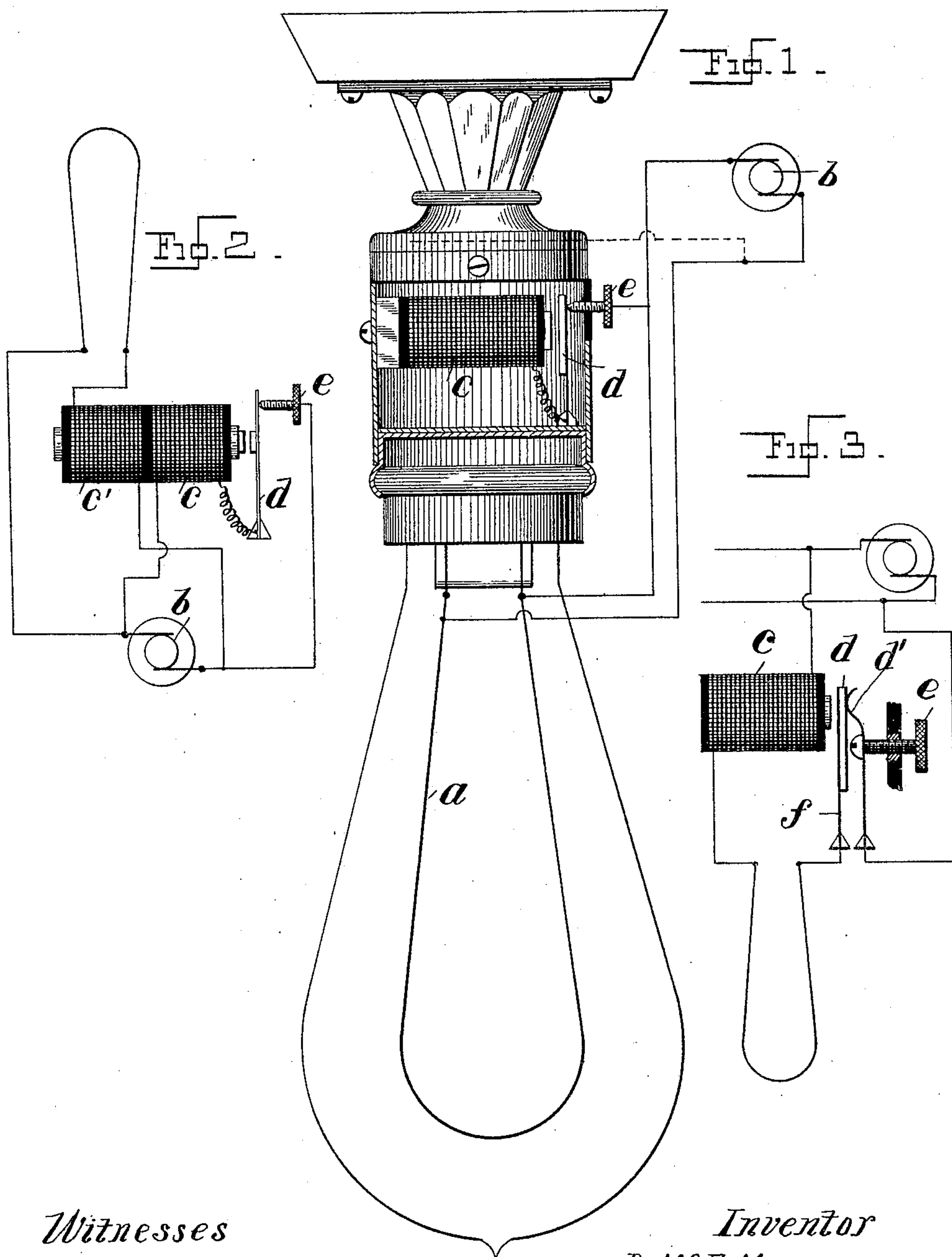
(No Model.)

D. McF. MOORE.

INCANDESCENT ELECTRIC LAMP REGULATOR.

No. 604,679.

Patented May 24, 1898.



Witnesses

W. A. Courtland

Nellie L. Pope.

Inventor

D. McF. MOORE

BY HIS ATTORNEY

Edward P. Thompson

UNITED STATES PATENT OFFICE.

DANIEL MCFARLAN MOORE, OF NEW YORK, N. Y., ASSIGNOR TO THE MOORE ELECTRICAL COMPANY, OF SAME PLACE.

INCANDESCENT-ELECTRIC-LAMP REGULATOR.

SPECIFICATION forming part of Letters Patent No. 604,679, dated May 24, 1898.

Application filed February 10, 1892. Serial No. 420,943. (No model.)

To all whom it may concern:

Be it known that I, DANIEL MCFARLAN MOORE, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Incandescent-Electric-Lamp Regulators, of which the following is a specification.

My invention relates to means for turning up and down the light of an incandescent electric lamp.

The object of the invention is to provide the lamp with highly-effective means of regulation.

The organization of the device is such that by turning a thumb-screw or its equivalent in one direction the light is increased in intensity and by turning it in the opposite direction the light is diminished to any degree.

The nature of the invention may be understood by the statement that the current of the lamp or part of the current is passed between two terminals which are adapted to be separated and brought together rapidly and automatically, the means for intermittently closing the terminals consisting, essentially, of a magnet and its armature arranged substantially as in the vibrator of an electric bell.

In order to more clearly set forth the exact nature of the way of carrying out the invention, so that any one versed in the art may construct and use the same, the accompanying drawings are hereunto annexed and described.

Figure 1 shows a complete equipment of the invention in connection with an electric installation, the same being partly in cross-section, partly in full, and partly in diagram in order to set forth the features in a compact and concise manner. Fig. 2 is a diagram of the modification herein described. Fig. 3 shows a further modification.

In order to set forth the gist of the invention without regard to all the surroundings, such as the bracket for the lamp, &c., only those parts are alluded to which actually are elements of the invention or else are essential to its operation.

In the drawings, *a* is the filament of any given incandescent electric lamp, and *b* is the generator. The two elements just named are in circuit with each other, while the mag-

net *c* and its vibrator, consisting of the thumb-screw *e* and spring-armature *d*, are in a shunt-circuit to the said filament. Adjustment of the said screw adjusts the electrical conditions, and the consequence is that the intensity of the lamp is regulated to any desired limit. The experiment shows that a spark is scarcely visible and non-injurious to the contact-points between the screw *e* and spring-armature *d*, which may be tipped with platinum for the purpose of durability. It is evident that the magnet *c* and vibrator may be in series with the filament, and that such an arrangement might be considered preferable, and it is also evident that the principle of the invention remains the same.

In Fig. 2 is shown a modification, as above stated. In this case the currents are relatively also arranged in shunt to one another; but it is evident that the same may be modified in practice, as stated in relation to the disposition in Fig. 1. The dynamo is *b*, as before, and also the thumb-screw and magnet are respectively *e* and *c*. These elements are in circuit with one another, while the filament *a* is in a shunt-circuit, which also includes a second coil *c'*, which is within inductive action to the coil *e*. The manner of operating is the same as in the case of the disposition shown in Fig. 1. Simply turn the screw *e* in one or the other direction and the light is regulated.

I have tried also the device and arrangement shown in Fig. 3, where the armature is not only on a spring *f*, but there is also a spring-terminal *d'*, which bears upon the armature as another terminal, and which is controlled as to its pressure on the armature *d* by the screw *e*, which can move back and forth, but which is fastened to the spring *d'*. The current passes through, first, the magnet *c*, then the armature *d*, then the spring *d'*, and, finally, to the opposite pole of the generator.

The lamp, whose filament is *a*, represents, typically, a translating device.

In my Patent No. 502,444, of August 1, 1893, I have shown and claimed, in combination with certain elements, the opening and closing of the electric circuit at a point within a sealed inclosure either evacuated or containing an inert atmosphere. In this application

I claim certain elements, as set forth, in combination with means for automatically alternately opening and closing a circuit independently of a surrounding rarefied or chemically inert atmosphere.

5 I claim as my invention—

1. In a system for regulating the current which operates an incandescent electric lamp, the combination with an incandescent electric lamp of a magnet in circuit therewith, means for automatically and variably opening and closing both the circuit of said magnet and that of said lamp at terminals which are independent of a surrounding rarefied or inert gas.

15 2. An incandescent-electric-lamp regulator, consisting of the combination with the filament thereof, located within an evacuated

bulb, of circuit-breaking terminals outside of the bulb in free air, and means for automatically maintaining vibration of the terminals relatively to and from each other.

3. The combination of an incandescent electric lamp, its filament, and an automatic circuit-breaker in the circuit of said filament arranged to make and break the circuit through said filament, rapidly and continually.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 8th day of February, 1892.

D. MCFARLAN MOORE.

Witnesses:

EDWARD P. THOMPSON,
GEORGE T. MIATT.