

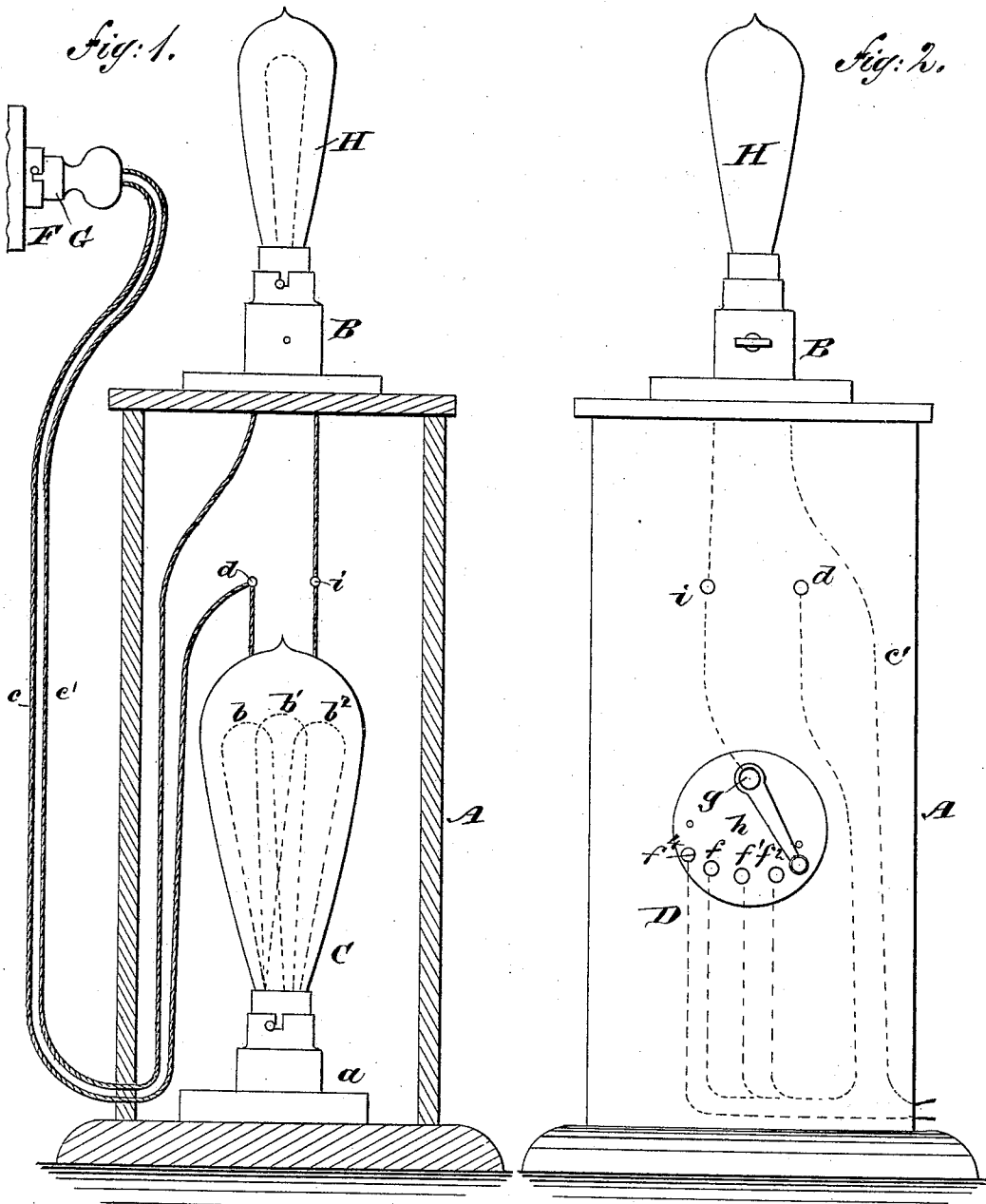
(No Model.)

2 Sheets—Sheet 1.

G. W. HALL & J. J. DE MARR.
REGULABLE ELECTRIC LAMP.

No. 486,334.

Patented Nov. 15, 1892.



WITNESSES:

Chas. Nira
C. Sedgwick

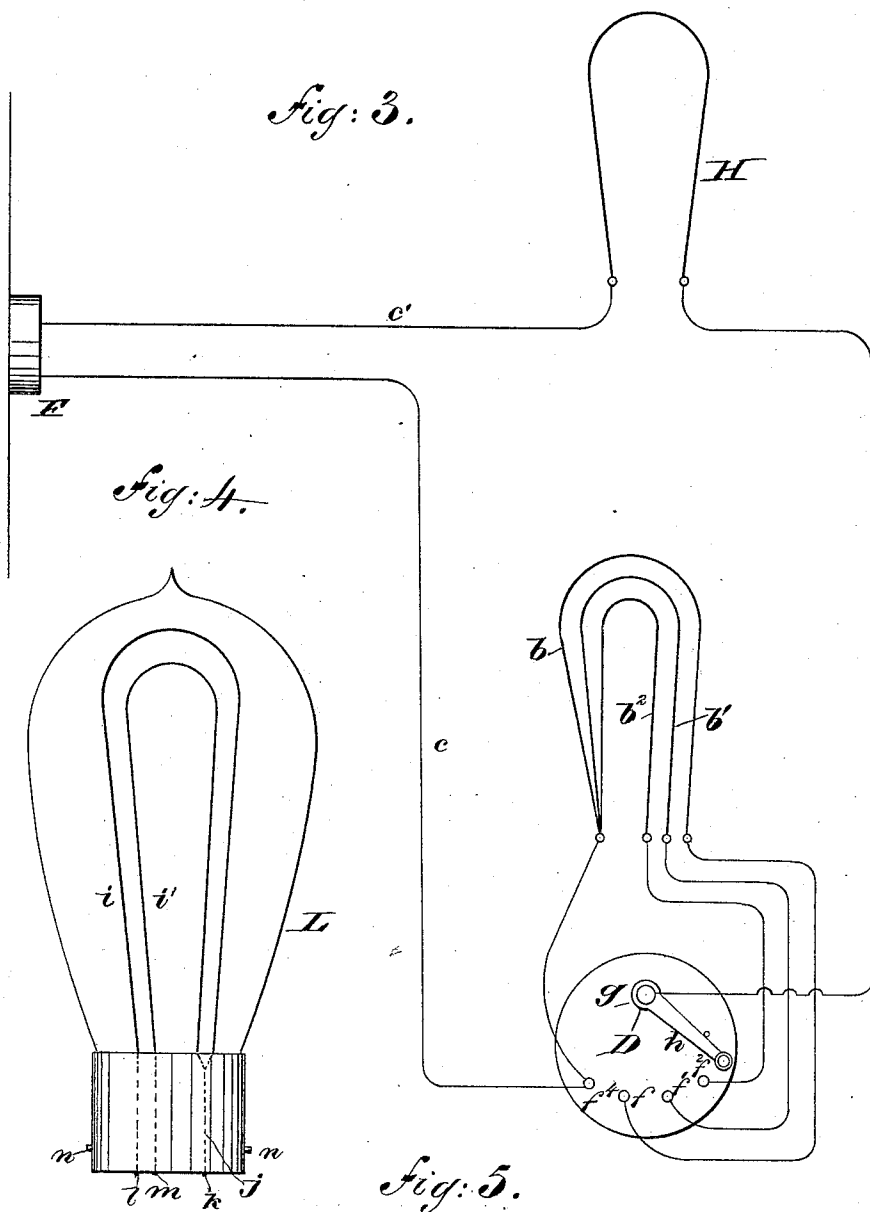
INVENTORS.

G. W. Hall
BY J. J. De Marr
Munn & Co
ATTORNEYS.

2 Sheets—Sheet 2.

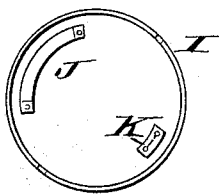
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UNITED STATES PATENT OFFICE.

GEORGE W. HALL AND JOSEPH J. DE MARR, OF GEORGETOWN, COLORADO.

REGULABLE ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 486,334, dated November 15, 1892.

Application filed December 1, 1891. Serial No. 413,695. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. HALL and JOSEPH J. DE MARR, both of Georgetown, in the county of Clear Creek and State of Colorado, have invented a new and Improved Regulable Electric Lamp, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side sectional elevation of our improved electric lamp. Fig. 2 is a rear view. Fig. 3 is a diagram showing the circuits. Fig. 4 is a side elevation of a lamp designed for a fifty-volt circuit, and Fig. 5 is a plan view of the auxiliary-lamp switch.

Similar letters of reference indicate corresponding parts in all the views.

The object of our invention is to provide a regulable lamp for use in places—such as hospitals, bedrooms, halls, &c.—where the full light of the lamp is not required continuously, but where it is desirable to produce full illumination occasionally.

Our invention consists in the combination, with an electric lamp, of a resistance, preferably in the form of one or more concealed lamps or a concealed lamp having several carbon filaments of different resistance, and a switch for throwing in the different resistances, and also for short-circuiting the resistances, all as will be hereinafter more fully described.

The casing A, which supports the lamp-socket B, is of sufficient size to contain the resistance-lamp C. The casing is constructed of material which obscures the light of the resistance-lamp, and upon the back of the casing is placed a four-point switch D. The socket *a* of the resistance-lamp C is secured to the bottom of the casing A and is adapted to receive the lamp C, which is provided with carbon loops *b b' b²* of different resistance.

Our improved lamp is more particularly designed as a portable lamp, and is connected with a stationary lamp-socket F by the plug G and flexible conductors *c c'*. The conductor *c* enters the casing A near the bottom thereof and extends to the point *f⁴* of the switch D, and the point *f⁴* is also connected electrically with one terminal of each of the carbons *b b' b²* of the lamp C, the other terminal being connected with the points *f f' f²*

of the switch D, and the pivot *g* of the switch-arm *h* is connected electrically with one of the springs of the socket B, containing the lamp H. The current passes from the stationary socket F through the plug G, conductor *c* to the point *f⁴* on the switch D, thence to the ends of the carbons *b b' b²*, through one of the carbons to one of the switch-points *f f' f²*, contacted by the arm *h*, through the said arm and its pivot to one of the springs of the lamp-socket B, through the carbon filament of the lamp H, thence through the other spring of the lamp-socket to the conductor *c'*, thence back to the socket F.

When the switch-arm *h* is on the point connected with the carbon of the lowest resistance of the lamp C the lamp H is moderately illuminated. When the switch-arm *h* is turned so that the current flows through a higher-resistance filament of the lamp C, the illumination of the lamp H is reduced, and when the current flows through the highest-resistance filament of the lamp C the lamp H is very slightly luminous.

When it is desired to remove all resistance and to secure the full brilliancy of the lamp H, the switch-arm *g* of the switch D is brought into contact with the point *f⁴*, thus cutting out the lamp C and allowing the required amount of current to flow to the lamp H.

It is obvious that we may substitute any suitable resistance for the lamp C, or in some cases we may employ a lamp having only a single carbon filament of sufficient resistance to reduce the illumination of the lamp H as much as may be required.

Where the opaque case is objectionable, we provide a socket I, having a long contact-spring J and a short contact-spring K in the bottom thereof, which are connected with the leads. The lamp L, which is fitted to the socket I, is provided with two carbon filaments *i i'*, which are both connected at one end with a conductor *j*, extending out through the lamp-globe and terminating in a button *k*. The other terminals of the filaments are connected with buttons *l m*. The lamp L is connected with its socket by a bayonet-joint, the studs *n*, projecting from the sides of the lamp, being inserted in L-shaped slots in the side of the socket. When the lamp is in its position in the socket, the button *k* touches the spring

J and the lamp may be turned so as to bring one or the other of the buttons *l m* into contact with the spring K. The carbon filaments *i i'* are made of different resistance to permit
5 of securing a strong or weak light, according as one or the other of the filaments is thrown into the circuit by turning the lamp in its socket.

Having thus described our invention, we
10 claim as new and desire to secure by Letters Patent—

The combination, with the lamp-socket I,

the long contact-spring J, and the short contact-spring K, of the lamp L, provided with carbon filaments *i i'* of different resistance, 15 the carbon filaments being connected to the contact-button *k* at one end and connected with separate contact-buttons *l m* at the opposite end, substantially as specified.

GEORGE W. HALL.

JOSEPH J. DE MARR.

Witnesses:

JNO. H. HUSTED,

JAS. H. HARVEY.