

(No Model.)

J. L. CURTISS.
INCANDESCENT ELECTRIC LAMP.

No. 467,276.

Patented Jan. 19, 1892.

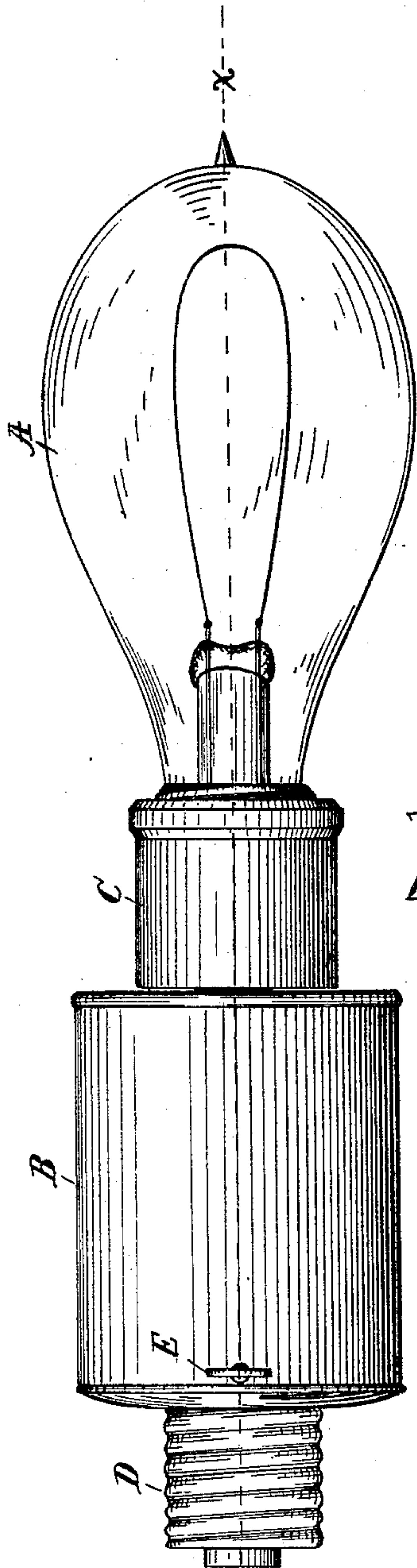


Fig. 1.

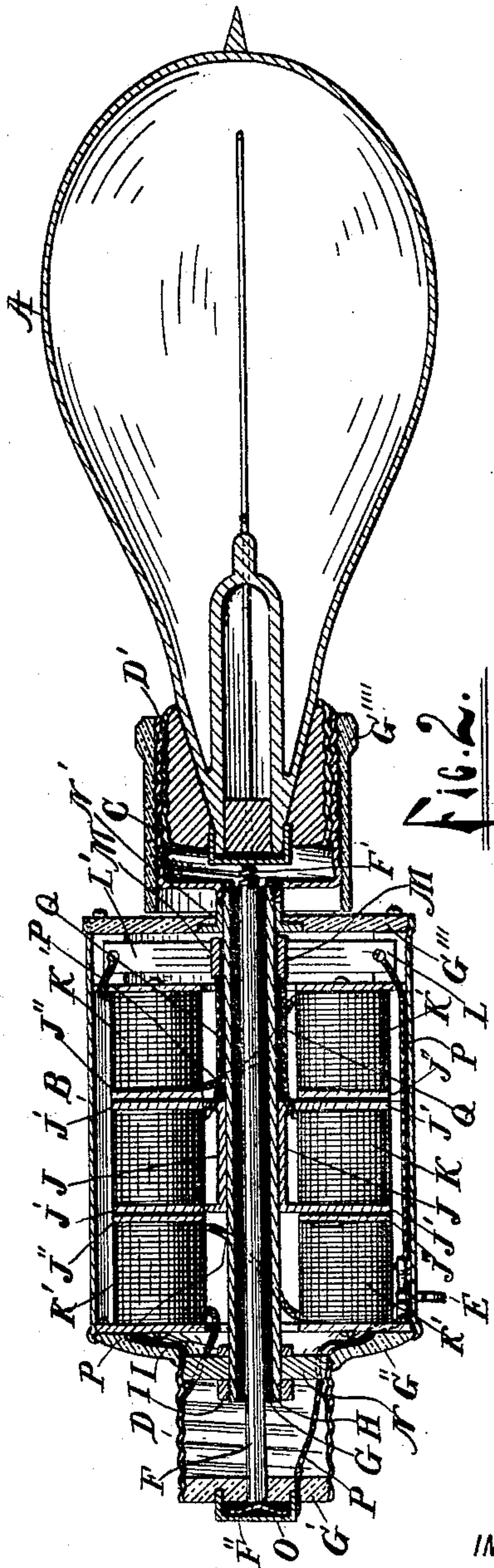


Fig. 2.

WITNESSES: X O

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INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 467,276, dated January 19, 1892.

Application filed July 24, 1891. Serial No. 400,598. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. CURTISS, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Electric Lights; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in electric lights which are rotated by an electric motor; and its object is to provide the same with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of a device embodying my invention, and Fig. 2 a central longitudinal section on the line $x x$ of Fig. 1.

Like letters refer to like parts in all of the figures.

A represents the usual incandescent lamp. B is the case of a small electric motor arranged with its axis in line with the axis of the lamp and provided at one end with a suitable rotary socket C, into which said lamp can be screwed, and at the opposite end with socket-electrodes D and O, adapted to fit the usual lamp-socket, and a key E to cut out the motor-circuit when the lamp is not to rotate.

F is the axial shaft of the motor, having a spring-electrode F' at one end to connect it with the inner electrode of the lamp A and at the other end engaging a spring connection F'' within the insulated metallic cup O, which cup engages the spring or inner electrode of the lamp-socket and receives the current therefrom.

G is a tube of insulating material around F, surrounding which is a metallic tube H, which is journaled in bearings N and N' near each end and provided with collars I I at each side of N, which latter is of conducting material, to connect said tube with the outer electrode D. Attached to the opposite end of said tube is a socket D', adapted to receive the lamp and electrically connect the outer electrode of the same with the said tube.

G' G'' G''' represent the heads of the core and socket nipple, which are of insulating

material. I thus mount the lamp upon mechanism that is free to rotate the lamp on its axis, and at the same time forms an insulated electric circuit for the same, adapted to receive the lamp at one end and engage the ordinary lamp-socket at the other, the circuit being through the cup O, spring F'', rod F, spring F' to the inner electrode of the lamp; then from the other electrode of the same through the socket D', tube H, bearing N to the outer electrode D. To rotate this system I take out a shunt-circuit from the cup O through the wire P to the commutator-brush L of any suitable motor, and provide any suitable key E to cut out said circuit when desirable, connecting the return-circuit of said motor with the electrode D in any suitable manner.

In the drawings the motor consists of a series of field-magnets J'', supported upon rings (not lettered) within the case and provided with exciting-coils K', connected in circuit by the wires P, one end of which attaches to the commutator-brush L' and the other to the outer electrode D, and a series of armatures J', attached to a sleeve J, fixed on the tube C, which latter is rotated thereby. Said armatures have exciting-coils K electrically connected to the commutator M by the wire Q.

I do not claim any special form of motor, and it may be modified to suit the circuit, either direct or alternate. A motor having no dead-center points is desirable, however. I thus provide a compact and convenient small motor adapted to fit the ordinary lamp-socket and receive the ordinary incandescent lamp, having its axis of rotation in line with the axis of the lamp. Said motor is thus adapted to be inserted between the ordinary lamp and socket and as readily removed, and when in place and the motor-circuit closed produces rapid rotation of the lamp on its axis, the result being to change the appearance and effect of the light, distributing its action throughout the space traversed by the rotating carbon, thus softening the effect and at the same time materially increasing the apparent amount of illumination.

What I claim is—

1. An electric motor provided with a socket at one end adapted to receive an incandescent lamp and electrodes at the other adapted

to fit the lamp-socket, and electrical conductors from said electrodes to said lamp, substantially as described.

2. In combination with an arc lamp, an electric motor having a tubular axis and a conducting-rod within and insulated from the same, said tube and rod movably connected at one end to electrodes adapted to fit a lamp-socket, said tubular axis having at the other end a socket to fit the outer electrode of the lamp and electrically connect the same and said rod in electrical connection with the inner electrode of said lamp, substantially as described.

3. In combination with an incandescent lamp, an electric motor having a socket to receive the lamp at one end, electrodes to fit the socket at the other end, and axial conductors connecting said lamp and electrodes, field-magnets and armatures having coils connected in shunt-circuit with the said electrodes, and a key to cut out said circuit, substantially as described.

4. In an electric motor, a cylindrical case having heads of insulating material, a tubular axis journaled at one end in one of said heads and provided with a socket to fit an arc lamp and electrically connect the same, said tube journaled at the other end in a bearing of conducting material within an electrode adapted to fit a lamp-socket and provided with collars at each side of said bearing, an insulating-head in said electrode, a cup attached to said head and inclosing a spring, and a rod within said axial tube, insulated therefrom, engaging said spring at one end, and in electrical connection with the inner electrode of the lamp at the other end, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN L. CURTISS.

Witnesses:

LUTHER V. MOULTON,
LOIS MOULTON.