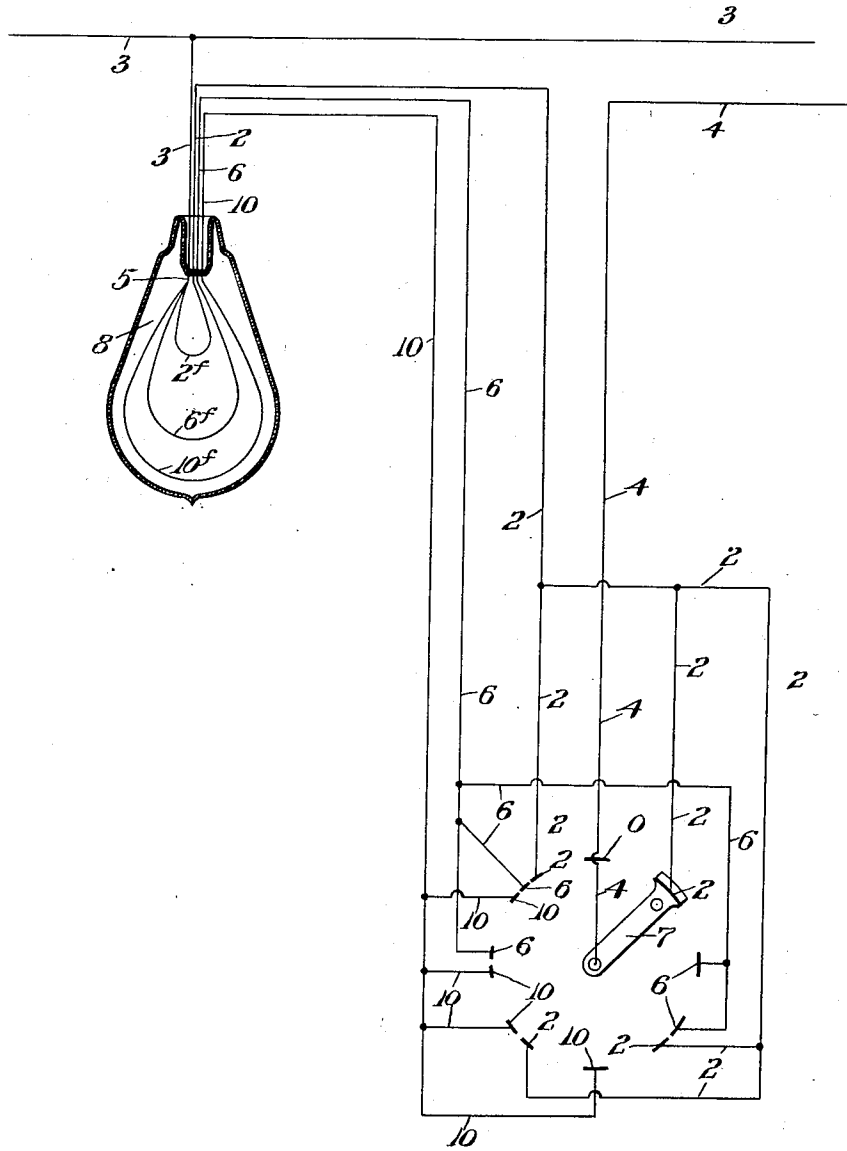


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 INCANDESCENT LAMP SYSTEM.  
 APPLICATION FILED JULY 28, 1908.

962,435.

Patented June 28, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## INCANDESCENT-LAMP SYSTEM.

932,435.

Specification of Letters Patent. Patented June 28, 1910.

Application filed July 28, 1908. Serial No. 445,808.

*To all whom it may concern:*

Be it known that I, YASUKE KAWASAKI, subject of the Emperor of Japan, residing at Vancouver, in the Province of British Columbia, Canada, have invented a new and useful Improvement in Incandescent-Lamp Systems, of which the following is a specification.

This invention relates to an incandescent lamp circuit and to the combination therewith of a lamp which with the same voltage will emit various candle powers of light, while the amperage of the current used will vary only according to the candle power of illumination used. This object I attain by providing a lamp having two or more filaments of different sizes to give with the same voltage various candle powers of light and by providing means whereby the current may be passed in parallel through any one or other or group of the filaments of the lamp or lamps in the circuit.

The invention is particularly described in the following specification, reference being made to the drawing by which it is accompanied, which is a diagrammatic representation of a circuit showing the connection of the filaments of one lamp therein to the several wires of the circuit and to the means for connecting these several wires that the current may pass as desired through them.

In these drawings 8 represents an incandescent lamp bulb having three filaments 2', 6' and 10' of different candle powers which may be assumed as indicated by their initial figures, viz., a two candle power filament, a six candle power filament and a ten candle power filament. One end of each filament is connected at 5 to the positive wire 3 of the circuit and the other end of each filament is connected respectively to separate negative wires 2, 6 and 10, which reference figures are selected as being numerically indicative of the assumed candle power of the filaments to which they are connected. With this provision of filaments in the lamp and manner of connecting the circuit wires thereto, the current may be passed in parallel through any one or other or any combined group of the filaments and those through which the current is passed will be rendered fully incandescent while the amperage of the current used will be proportionate to the amount of incandescence or illuminating power of the lamp.

The current may be directed to pass

through any desired filament or group of filaments by a circuit changer, illustrated in the lower part of the diagram, which circuit changer consists of a contact arm 7 to the axis of which the negative wire 4 of the external circuit is connected and this arm is susceptible of pivotal movement over a series of contacts forming the terminals of the negative wires 2, 6 and 10 of the lamp circuit. These terminal contacts are arranged concentrically singly and in groups to be successively engaged by the end of the contact arm 7 which may thus be placed to connect the various negative wires of the lamp circuit to the negative wire 4 of the external circuit.

Starting at the zero point 0 in which position the current is entirely cut off from the lamp circuit, the contact arm 7 may be moved to the terminal of 2 when the current will pass only through the smallest filament 2' of the lamp or lamps in the circuit, or to that of 6 or of 10 or to those of the groups 2 and 6 or 2 and 10 or 6 and 10 or to 2, 6 and 10.

With this system a single lamp having two different sized filaments may be made to give forth three different candle powers, and a lamp having three filaments, as illustrated in the diagram, may be varied to give seven different candle powers and being connected in parallel the glow of the filaments will be equal and the amperes of the current used will be directly proportioned to the candle power used.

The advantage of this arrangement is obvious in the facility it gives for varying the degree of illumination of a group of incandescent lamps without cutting out individual lamps which in a chandelier spoils the effect. It may also be advantageously used for the rooms and corridors of hotels and public buildings where it may be desired to increase or reduce the illumination at any particular time.

Having now particularly described my invention and the manner of its application, I hereby declare that what I claim as new and desire to be protected in by Letters Patent, is:

1. In an incandescent lamp system, the combination with a lamp having a plurality of filaments which have one common terminal, a pair of line wires connected with a source of electric energy, one of said line wires being connected with the common terminal of said filaments, a circuit controller

having a movable arm connected to the other line wire, said circuit controller including a plurality of sets of contacts, certain of said sets of contacts consisting of a single contact member, others of said sets of contacts consisting of two contact members and another of said sets of contacts consisting of three contact members, and electrical connections between one of said filaments and one of said single contact sets, electrical connections between said single contact set and one of the contacts of a double contact set, electrical connections between said single contact set and one of the contacts of said triple contact set, substantially as shown and described.

2. In an incandescent lamp, the combination with a lamp having three separate filaments, said filaments having a common terminal directly connectible to a source of electric energy, a switch having a movable arm also directly connectible to a source of electric energy, said switch including a plurality of sets of contacts, certain of said sets of contacts consisting of a single contact member and others of said sets of contacts consisting of a double contact member and still another of said sets of contacts consisting of a triple contact member, the contact members of a set being insulated from one another and said sets of contacts being insulated one set from another, electrical connections between one terminal of one of said filaments and one of the contact members of said triple contact set, electrical connections

between the same filament terminal and one of the contact members of one of said double contact sets, and electrical connections between the same filament terminal and one of said single contact member sets, and electrical connections between certain of said other contacts and the respective filaments.

3. The combination with a lamp having a plurality of filaments each having a common terminal and adapted to be connected to one line wire from a source of electric energy, a circuit controller having a movable arm electrically connectible to another line wire from the source of electric energy, said circuit controller also including a plurality of groups of contacts certain of said groups of contacts consisting of a single contact, another of said groups of contacts consisting of a plurality of contacts, the contacts of each group being separated from one another and those of one group being separated from those of the other groups, electrical connections between the free terminals of said filaments and certain of the contacts in certain of said groups, and said controller arm having a contacting portion to simultaneously engage all of the contacts of a group, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

YASUKE KAWASAKI.

Witnesses:

ROWLAND BRITTAIN,  
CLIVE S. CARMAN.