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H. W. GREMMELS.
COMBINED SOCKET AND PLUG FOR INCANDESCENT LAMPS.

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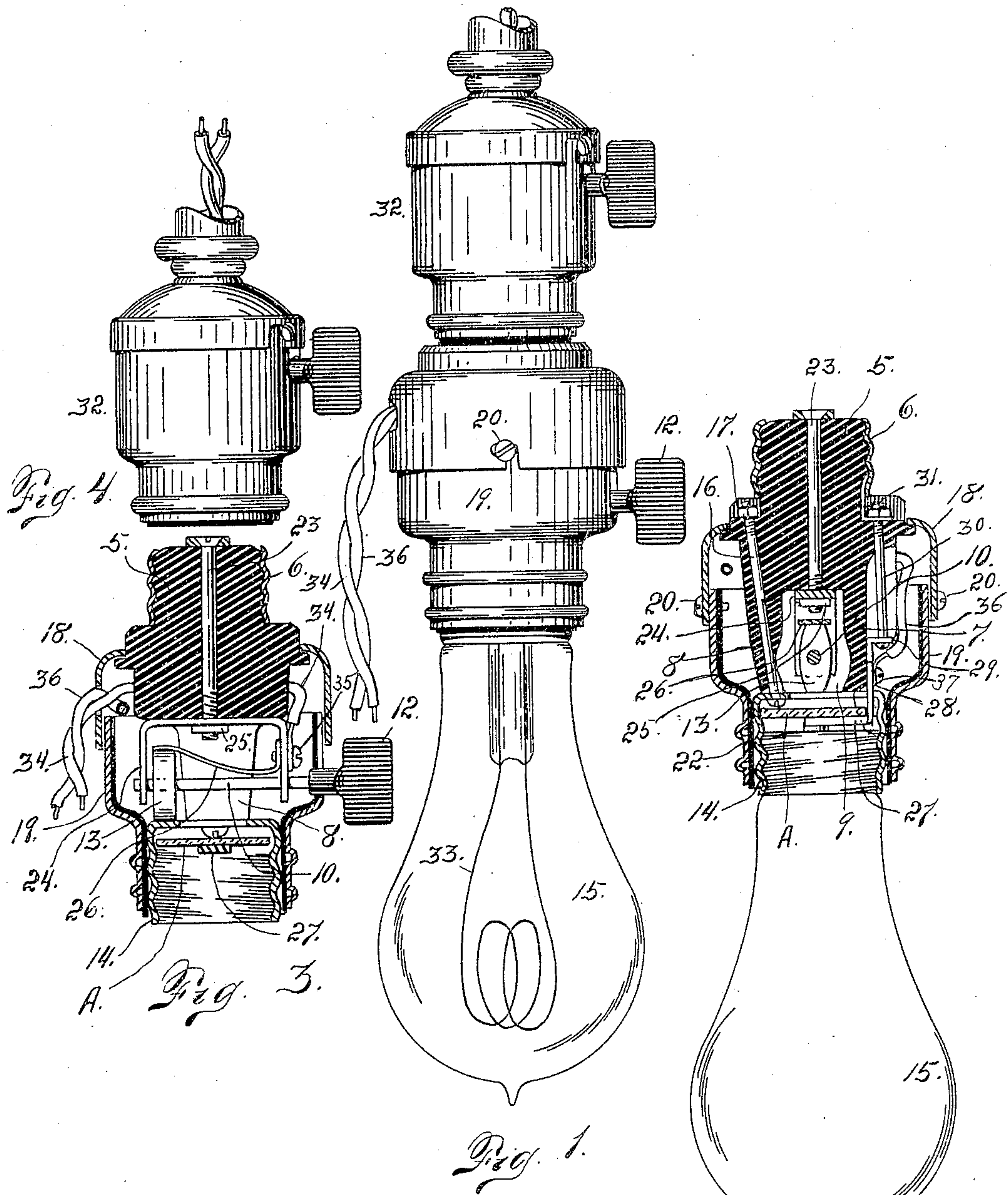


Fig. 2
H. W. Gremmels.
Inventor

Witnesses
Otto C. Hoddick
Dena Nelson.

by *A. H. Miller*
Attorney

UNITED STATES PATENT OFFICE.

HENRY W. GREMMELS, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF
TO MARTIN J. JACKSON, OF DENVER, COLORADO.

COMBINED SOCKET AND PLUG FOR INCANDESCENT LAMPS.

No. 807,671.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY W. GREMMELS, a citizen of the United States, residing in the city and county of Denver, State of Colorado, have invented certain new and useful Improvements in a Combined Socket and Plug for Incandescent Lamps; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to a combined socket-and-plug construction for incandescent lamps, making it practicable to connect conductors with the lamp-circuit below the main socket, whereby a motor and lamp or any other device to be operated by the light-circuit may be used where there is only one lamp-socket.

My improvement consists in forming a plug and a lamp socket consisting of a single device, the plug being adapted to enter a main socket, auxiliary conductors being connected with the lamp-circuit between the two sockets.

Having briefly outlined my improved construction, the invention will now be described in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation illustrating my improved device shown in connection with a socket of ordinary construction. Fig. 2 is a section taken through my improved device, showing the incandescent lamp in place. Fig. 3 is a section taken at right angles to Fig. 2, the lamp being detached. Fig. 4 is a detail view of the main socket located adjacent the construction shown in Fig. 3 and in position for the insertion of the plug extremity of the device.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a plug composed of any suitable insulating material, as porcelain. The upper or neck portion of this plug is shaped to enter the socket of an incandescent lamp and is surrounded by a metal sleeve 6. The lower portion of the plug is bifurcated and is composed of two arms 7 and 8, which occupy positions on opposite sides of a space 9, in which is located

the stem 10 of a key 12. On this stem is located a circuit-closing contact 13. To the lower part of the insulating-plug is secured the lamp-socket 14, being a hollow neck adapted to receive an incandescent lamp 15. The socket 14 is connected with the insulating-plug by a bolt 16, whose head or lower extremity engages the upper part of the socket, while a nut is threaded upon its upper extremity, the nut engaging the shoulder 17 of the insulating-plug. The plug below the neck 5 is inclosed by a casing 18, which is connected with the lower casing part 19 by screws 20.

Through the central upper portion of the socket is located a bolt 23, whose lower extremity terminates in the opening 9 between the arms of the bifurcated part of the plug. The lower extremity of this bolt 23 is connected with a metal contact 24 by means of a nut 25, applied to the lower extremity of the bolt. This contact 24 consists of a transverse piece and two depending arms, through which the stem 10 of the circuit-closing key passes and in which the said stem is journaled. To this U-shaped contact 24 is attached a leaf-spring 26, occupying a position just above the key-stem 10. When the key 12 is properly adjusted or is in the position shown in Fig. 3, the contact 13 simultaneously engages the spring 26 and the socket 14, thus closing the lamp-circuit. The circuit is completed through a contact having an interior horizontal arm 27, an outer vertical arm 28, and a top part 29, which is connected with the metal part 6 by means of a bolt 30 and a contact 31.

Now if it be assumed that the upper part of the plug is inserted in a socket 32 of ordinary construction the path of the current through the lamp-circuit may be traced as follows: from the socket 32 through the bolt 23, the contact 24, the spring 26, the contact 13, the socket 14, the lamp-filament 33, the contacts 27, 28, and 29, the bolt 30, the contact 31, and metal part 6 to the other pole of the main socket 32, it being assumed that the latter is of ordinary construction.

Now if it is desired to place a translating device of any character, as another lamp, a motor, or any other device requiring for its use an electric current, suitable conductors are connected with the opposite branches of the light-circuit already traced through the

plug and its connections, the said wires being taken out between the main socket 32 and the auxiliary socket 14. As shown in the drawings, one of these conductors (designated 34) is connected with one arm of the contact 24 by means of a screw 35, while a conductor 36 is connected with the part 28 or the other branch of the circuit by a screw 37, thus completing the circuit through the translating device (not shown) in a manner that will be readily understood.

From the explanation of the circuit of the combined plug and socket already made it will be understood that if the key 12 is turned to cut the lamp 15 out of the circuit the auxiliary circuit through the conductors 34 and 36 will still remain closed. Hence the translating device connected with the auxiliary circuit may be operated independently of or simultaneously with the lamp 15, as may be desired. A construction of this character will be found very convenient, since it makes it practicable where there is only a single main socket 32 to have any number of translating devices connected with the circuit by simply employing a number of my improved devices. It will be understood that instead of using a single auxiliary circuit a number of these circuits may be obtained by employing a number of my combined devices. For instance, instead of placing the lamp 15 in the socket 14 of the device the neck 5 of another plug could be inserted in this socket, and another auxiliary circuit connected with the lower plug, and so on, the lamp 15 being placed in the lowermost socket 14. The ad-

vantages of a construction of this kind will therefore be readily understood.

The parts 14 and 27 are insulated from each other by a disk A, composed of mica or other suitable insulating material.

Having thus described my invention, what I claim is—

A combined socket and plug for incandescent lamps comprising an insulating-body bifurcated at one extremity and surrounded by a metal sleeve at the opposite extremity, a lamp-socket, a bolt connecting the socket with the plug, a U-shaped contact mounted between the arms of the bifurcated part, a bolt passing centrally through the insulating-body and connecting the U-shaped contact with the body and with one pole of the current source, a switch-spindle located between the arms of the bifurcated part and journaled in the U-shaped contact, a contact mounted on the spindle and adapted when properly adjusted to form an electrical connection between the U-shaped contact and the lamp-socket, whereby the current passes from one pole of the source to the lamp, and a suitable connection between the lamp and the other pole of the source comprising an angle-shaped contact and a bolt connecting the last-named contact with the metal sleeve surrounding the insulating-body.

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

HENRY W. GREMMELS.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.