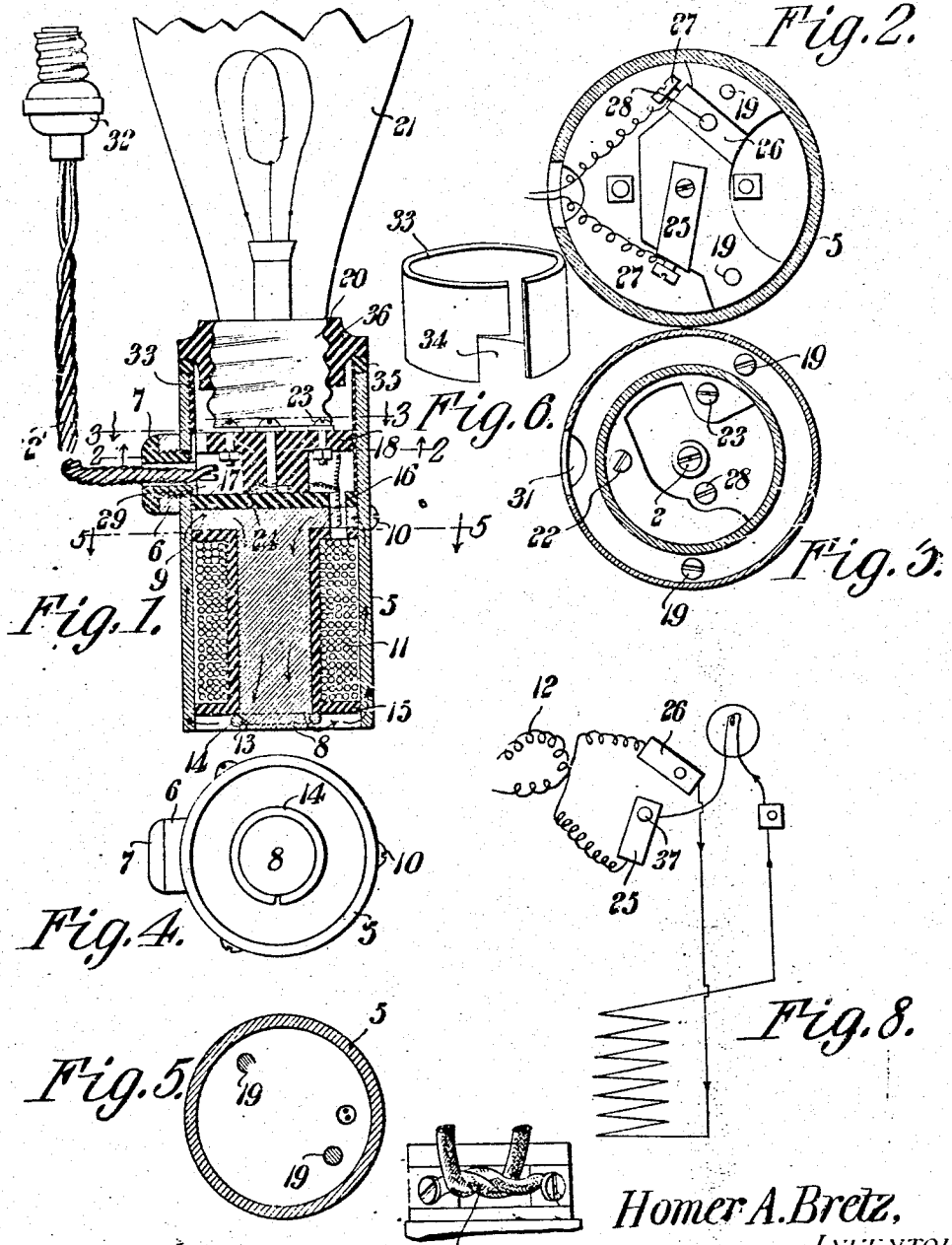


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INCANDESCENT LAMP SOCKET.

APPLICATION FILED MAR. 4, 1907. RENEWED MAR. 5, 1909.

938,038.

Patented Oct. 26, 1909.



WITNESSES:
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Fig. 7 By *CA Snow & Co.*
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INCANDESCENT-LAMP SOCKET.

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To all whom it may concern:

Be it known that I, HOMER ALLISON BRETZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Incandescent-Lamp Socket, of which the following is a specification.

This invention relates to incandescent lamps and more particularly to means for supporting the lamp in position on a metal surface or other suitable support.

The object of the invention is to provide an incandescent lamp having an electromagnet associated therewith and connected in series with the lighting circuit so that when the current is turned on the magnet will be energized and thus support the lamp in position on a metallic surface without the employment of hangers, suspension cords and similar auxiliary supporting devices.

A further object of the invention is to provide means whereby the exciting coil may be readily detached from the shell or casing and further to provide improved means for connecting the terminals of the lighting circuit to the binding screws.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in the form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of an incandescent lamp socket constructed in accordance with my invention. Fig. 2 is a transverse sectional view taken on the line 2-2 of Fig. 1 and looking in the direction of the arrow. Fig. 3 is a similar view taken on the line 3-3 and looking in the direction of the arrow. Fig. 4 is a bottom plan view. Fig. 5 is a transverse sectional view taken on the line 5-5 of Fig. 1. Fig. 6 is a perspective view of the insulating collar or sleeve de-

tached. Fig. 7 is a front elevation of the insulating block showing the manner of attaching the terminals of the electric circuit. Fig. 8 is a diagrammatical view.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The device consists of an open ended metallic casing or shell 5 preferably cylindrical in form, as shown and provided with a laterally extending collar 6 the interior walls of which are threaded for engagement with a plug or bushing 7, the latter being formed of rubber, gutta-percha or other suitable insulating material.

Housed within the casing 5 is an electromagnet, the core 8 of which is provided with an annular flange 9 which bears against the interior walls of the metal casing 5, said core being secured in position on the casing by means of screws or similar fastening devices 10 which pierce the walls of the casing and engage the flange, as shown.

Interposed between the interior walls of the casing 5 and the core 8 is an exciting coil 11, the terminals of which are connected in series with the lighting circuit 12 so that when the current is turned on the electromagnet will be energized and thus support the lamp on a lathe, boiler or other metallic surface. The lower end of the core is provided with an annular groove 13 in which is seated a retaining ring 14, and interposed between the ring 14 and the exciting coil 11 is the adjacent head 15 of an insulating spool or bobbin, the opposite head 16 of the bobbin being interposed between the opposite end of the coil and the adjacent face of the flange 9.

Mounted on the flange of the core 8 is an insulating block preferably formed in two sections 17 and 18 detachably secured together and to the flange 9 by means of screws or similar fastening devices 19.

Mounted on the exposed face of the section 18 is a socket piece 20 the interior walls of which are threaded for engagement with the threaded terminal of an incandescent lamp 21 of any desired candle power. The socket piece 20 is retained in position on the section

18 by bolts 22 and 23 to one of which is connected one of the terminals of the exciting coil 11.

Embedded in suitable recesses 24 formed in the bottom of the section 18 are spaced contact plates 25 and 26 each provided with a binding screw 27 for engagement with the adjacent terminal of the lighting circuit 12. The plate 26 is provided with an auxiliary binding screw 28 for connection with the adjacent terminal of the exciting coil, said auxiliary binding screw 28 being extended upwardly through the section 18 so that the terminal of the exciting coil may be readily clamped in contact with the plate 26.

The upper section 18 is provided with a recess 29 for the reception of the conductors of the lighting circuit, said conductors being crossed and intertwined, as indicated at 30 and connected to the binding screws 27 thus locking the terminals in contact with the binding screws and preventing accidental displacement of the same in case a longitudinal pull is exerted on the conductors. The upper section 18 is also preferably formed with a segmental recess 31 to accommodate the electrical conductors 12' when the electromagnet is withdrawn from the casing so as to prevent the wire from binding against the interior walls of the latter and thus preventing the withdrawal of the exciting coil. The conductors 12' are provided with the usual extension plug 32 so that the lamp may be conveniently connected in an ordinary lighting circuit.

Interposed between the interior walls of the casing 5 and the section 18 is a split collar or sleeve 33 preferably formed of vulcanized fiber or other suitable insulating material and having a recess or opening 34 formed therein to accommodate the conductors 12', there being an insulating ring 35 interposed between the adjacent end of the casing 5 and a threaded collar 36 of the socket piece, as shown. If desired, however, the insulating ring 35 may be dispensed with and the latter formed integral with the threaded collar.

It will thus be seen that when the current is turned on the latter will flow through one of the conductors 12' to the contact plate 26 and thence through the exciting coil 11 to the binding screw 23 and thence through the lamp, pin 37, and plate 25 through the opposite conductor to the line, as indicated by the arrow in Fig. 8 of the drawings. When the lamp is lighted the magnetic circuit or lines of force will pass downwardly through the core 8 and metal object to which the socket is attached, and thence upwardly through the casing 5 and flange 9 to the core 8, as indicated by the arrows in Fig. 8 of the drawings. As soon as the current is turned off the magnet will be deenergized so that the lamp may be readily detached from the

metallic surface, or the lamp may be removed without turning off the current by merely tilting the socket so as to disengage the core of the magnet from said metal surface.

While the device is principally designed for supporting incandescent lamps on boilers, lathes and other metal objects in machine shops and similar places, it is obvious that the same may be used wherever a device of this class is found desirable.

Having thus described the invention what is claimed is:

1. An incandescent lamp including a casing, an electromagnet housed within the casing and provided with a laterally extending flange bearing against the interior walls of the casing, fastening devices piercing the walls of the casing and engaging the flange, and an energized circuit, the terminals of which extend through the walls of the casing and are connected in series with the lamp and electromagnet.

2. An incandescent lamp including a casing, an electromagnet provided with a core one end of which is formed with an annular groove and the opposite end thereof provided with a laterally extending flange bearing against the interior walls of the casing, fastening devices piercing the walls of the casing and engaging the flange, a retaining ring seated in the groove of the core, and an energized circuit connected in series with the lamp and magnet.

3. An incandescent lamp including a casing having an opening formed in one wall thereof, an insulating block disposed within the casing, a socket piece carried by the block for engagement with the lamp, an electromagnet bearing against the block and provided with a core having a retaining groove formed in one end thereof, a ring seated in said core, an insulating spool, one end of which is interposed between the ring and the exciting coil of the magnet, and an energized circuit the terminals of which are connected in series with the lamp and magnet.

4. An incandescent lamp including an open ended metallic casing having an opening forming in one wall thereof, an insulating block disposed within the casing and provided with a chamber, an electromagnet bearing against the insulating block, an energized circuit the terminals of which are housed within the chamber and electrically connected with the lamp and magnet, respectively, and a split sleeve interposed between the walls of the casing and insulating block and having an opening formed therein for the reception of the terminals of the circuit.

5. An incandescent lamp including an open ended metallic casing, an insulating block disposed within the casing and pro-

vided with a chamber having a recess communicating therewith, an electromagnet carried by the casing and bearing against the insulating block, and an energized circuit
5 the terminals of which are extended through the walls of the casing and having its ends intertwined and seated within the chamber, said terminals being electrically connected with the lamp and magnet, respectively.

- 10 6. An incandescent lamp including an open ended metallic casing, an insulating block disposed within the casing and provided with an intermediate chamber, spaced binding screws disposed within the
15 chamber, an electromagnet carried by the casing and an energized circuit the terminals of which are extended in opposite directions and intercoiled for connection with the adjacent binding screws, said lamp and magnet being connected in series with the circuit.
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7. An incandescent lamp including an open ended metallic casing having a perforated insulating bushing extending laterally

from one wall thereof, an insulating block
25 disposed within the casing and provided with an intermediate chamber, spaced binding screws disposed within the chamber, there being an opening formed in the block and communicating with the chamber, an
30 electromagnet carried by the casing and housed within the same, an energized circuit the terminals of which are extended in opposite directions and intercoiled for connection with the binding screws, said terminals being
35 operatively connected with the lamp and magnet, respectively, and a split sleeve interposed between the casing and the block and provided with an opening for the reception of the terminals of the circuit.
40

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HOMER ALLISON BRETZ.

Witnesses:

GEO. A. FULLER,
W. L. TRUEDELL.