(No Model.)

A. F. VETTER.

ELECTRIC LAMP SOCKET AND TAP.

No. 490,605. Patented Jan. 24, 1893.

Fig. 1

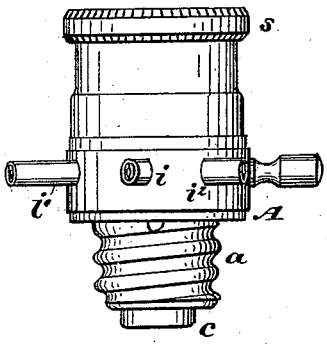

Fig. 2

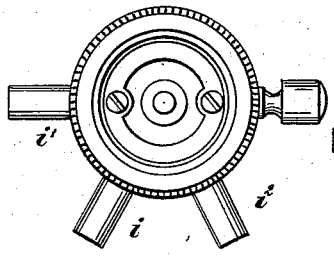

Fig. 3

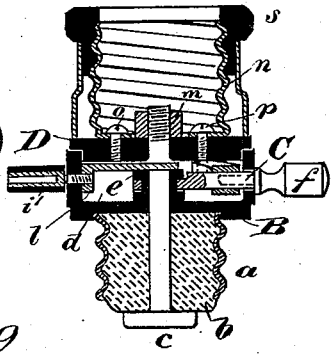

Fig. 4

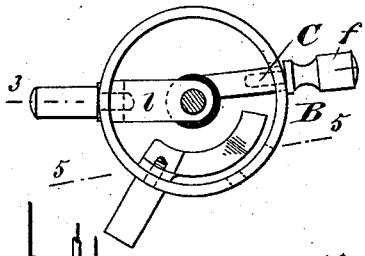

Fig. 9

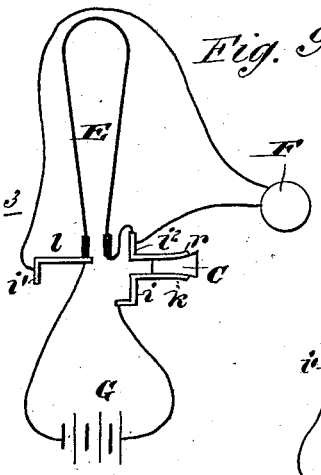

Fig. 10

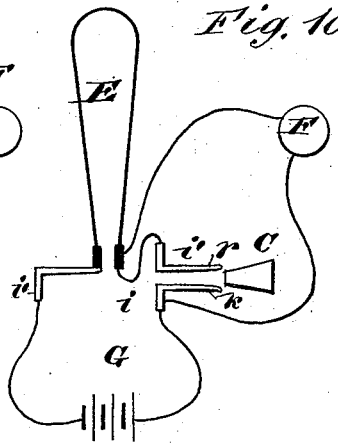

Fig. 7

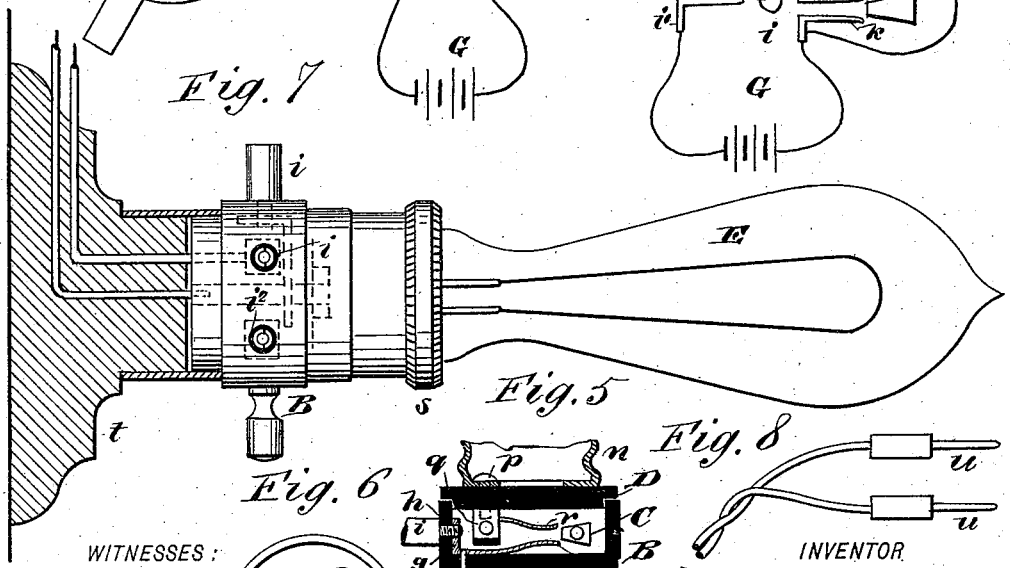

Fig. 5

Fig. 6

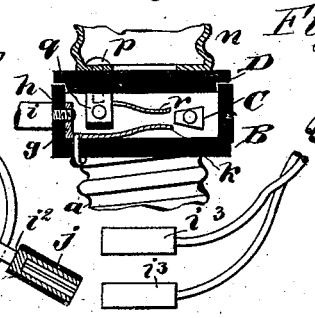

Fig. 8

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UNITED STATES PATENT OFFICE.

ALEXANDER F. VETTER, OF NEW YORK, N. Y., ASSIGNOR TO J. C. VETTER & CO., OF SAME PLACE.

ELECTRIC-LAMP SOCKET AND TAP.

SPECIFICATION forming part of Letters Patent No. 490,605, dated January 24, 1893.

Application filed May 20, 1892. Serial No. 433,668. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER F. VETTER, of New York city, in the county and State of New York, have invented a new and Improved Electric-Lamp Socket and Tap, 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 elevation of my improved electric lamp socket and tap; Fig. 2 is a plan view; Fig. 3 is a vertical transverse section taken on line 3—3 in Fig. 4; Fig. 4 is a plan view with the upper portion removed, showing the construction of the switch; Fig. 5 is a vertical transverse section taken on line 5—5 in Fig. 4; Fig. 6 is an inverted plan view of the upper portion of the socket; Fig. 7 is a side elevation, partly in section, of a wall socket; Fig. 8 is a side elevation of a flexible cord used in connection with the socket; Fig. 9 is a diagrammatic view of the switch and circuits, showing the circuits of the lamp and the external translating device arranged in parallel; and Fig. 10 is a diagrammatic view showing the lamp and external translating device arranged in series.

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

The object of my invention is to provide a simple lamp socket and tap which may be inserted in the place of a lamp in an ordinary lamp circuit, or which may be used as a wall socket which is adapted for receiving an electric lamp in the usual way, and also arranged for conveniently tapping the electric circuit so as to take the current in parallel with the lamp, or in series with it according to the requirements for use in translating devices such as electric motors, medical apparatus, &c.

My invention consists in a lamp socket provided with the usual well known device for attaching it to a wall socket, flexible cord, or other electric fixture, and constructed to receive an electric lamp in the usual way, but furnished with an intermediate chamber containing a switch by means of which a current may be turned on or off the lamp, and provided with electrical connections for receiving flexible cords or wires for taking the current from the socket either in parallel with the lamp or in series with it, all as will be hereinafter more fully described.

The socket A, in the present case is provided with the threaded ferrule *a*, which is adapted to an ordinary lamp socket, but I do not limit or confine myself to this or any particular method of attaching my device to the socket, or of attaching the lamp to my improved lamp socket and tap. The ferrule *a* incloses a body *b* of insulating material, through the center of which extends the bolt *c*. Upon the upper end of the ferrule *a* is placed a casing B, of insulating material, which is provided with an annular chamber *d*, which contains the several parts of the switch. On an insulating collar *e* at the center of the said chamber is fulcrumed a switch lever C, which projects through a slot in the side of the casing B, and is furnished with an insulating handle *f*.

To the bottom of the casing B, is secured an angled plate *g*, one arm of which extends upwardly against the wall of the casing and is furnished with a threaded aperture for receiving the shank *h* of the post *i*, which extends radially from the outer surface of the wall or casing. The said post consists of a metal tube split longitudinally to receive the terminal of the flexible cord and inclosed in an insulating casing *j*. The other arm of the angle plate *g* is connected electrically with the ferrule *a*. To the bolt *c* is attached a plate *l*, which extends to the wall of the casing B, where it is bent at an angle and provided with a threaded aperture for receiving the inner end of the post *i'*, which is made in the same manner as the post *i*, and will therefore need no description.

To the top of the casing B is fitted a cover D of insulating material, the said cover being held in place by a nut *m* on the bolt *c*. To the cover D is attached the internally and externally threaded ferrule *n*, by means of screws *o*, *p*. The screw *p* passes through the cover D, and enters a post *q*. To the said post is attached a commutator spring *r*, the free end of which is opposite and near the free end of the contact spring *k*. The post *q* is provided with a threaded aperture for receiving the shank of the post i^2, which is inserted therein and projects radially from the casing

B. The springs r, k, lie on opposite sides of the path of the switch lever C, and project a short distance into the path of the said lever so that when the lever is swung on its fulcrum it will pass between the said springs and establish an electrical connection between them. To facilitate the entrance of the lever C between the springs, it is made trapezoidal in cross section, as shown in Fig. 5. The ferrule n is designed to receive an ordinary incandescent lamp. To give the socket a finished plain cylindrical surface, the ferrule n is inclosed by a cylindrical cover which is held in place by an internally threaded and flanged ring s.

In the form shown in Fig. 7, the threaded ferrule a is omitted, and the wires from the angled plate g and the bolt c extend into a base or wall piece t, and are connected with the leads in the usual manner. When the lamp socket shown in Fig. 1 is used it is screwed into the ordinary fixture, and the current passes in and out by the bolt c and ferrule a.

The flexible cords shown in Fig. 8, used in connection with the lamp socket and tap are provided at one end with terminals u adapted to enter the posts i, i', &c., while at the opposite end they are furnished with posts i^3, which receive pins projecting from the translating device supplied with a current through the socket and lamp.

My improved lamp socket and tap is designed to be used in connection with the ordinary incandescent lamp E. The translating device F, which is to be supplied with the current, is connected with the posts i', i^2, when it is to be used in parallel with the lamp E. In this case the current from the generator G flows to the bolt c and bar l, where it divides, a part going through the carbon filament of the lamp E, another part going through the post i' and translating device F back to the posts i^2 and spring r, thence through the switch lever C, and spring k back to the generator. In this case the translating device and the lamp are in parallel. When the wires from the translating device are connected with the posts i, i^2, and the switch lever C is removed from the springs r, k, as shown in Fig. 10, the current flows through the translating device F and the lamp E in series.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent,—

1. In an electric lamp socket and tap, the combination with the lamp-holding device, of a pair of electrical contacts, a switch for closing the circuit between the contacts, and external electrical connections mounted on the socket whereby an external translating device may be thrown into the circuit in parallel or in series with the lamp, substantially as specified.

2. In an electric lamp socket and tap, the combination with the socket, of the contact springs k, r, the switch lever C, the binding posts i, i', i^2, and electrical connections, substantially as described.

ALEXANDER F. VETTER.

Witnesses:
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JOSEPH C. VETTER.