No. 672,642. Patented Apr. 23, 1901.

L. J. P. HOLLUB & H. MIGNAL.

ELECTRIC INCANDESCENT LAMP.

(Application filed Nov. 8, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 2.

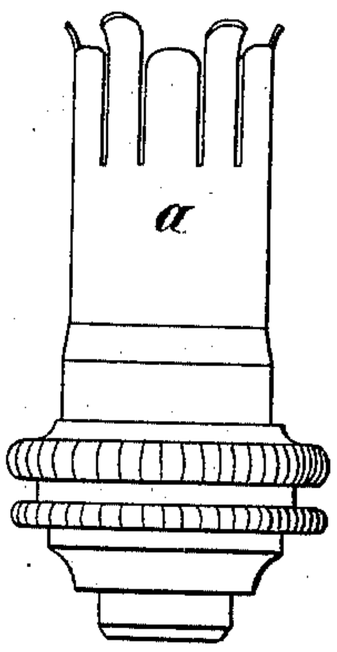


Fig. 3.

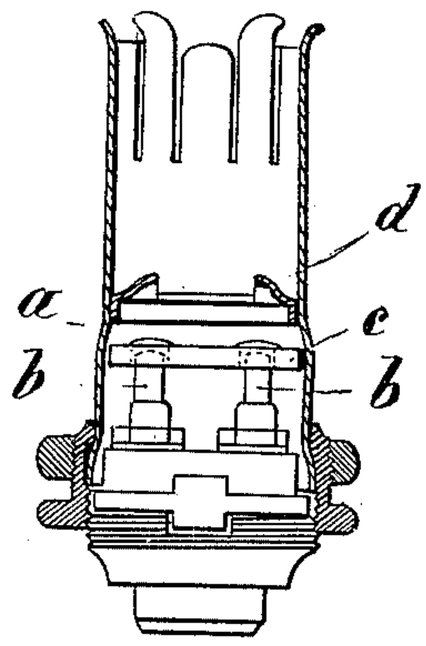


Fig. 5.

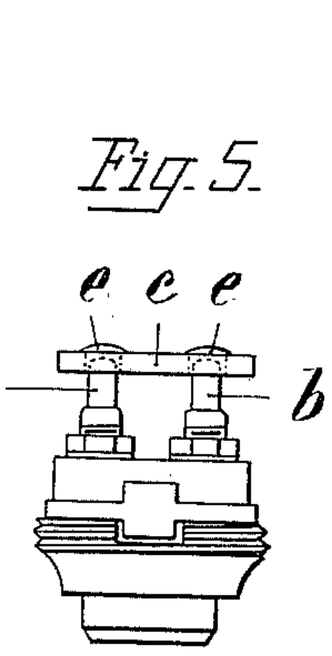


Fig. 1.

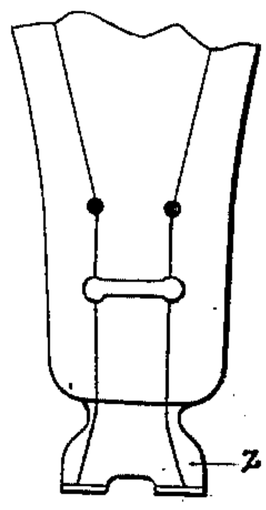
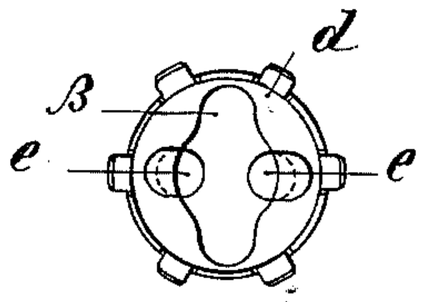


Fig. 4.



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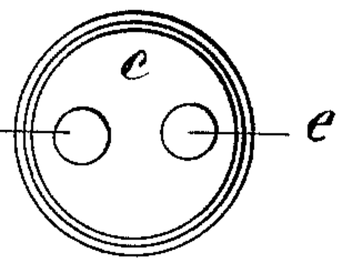

Fig. 7.

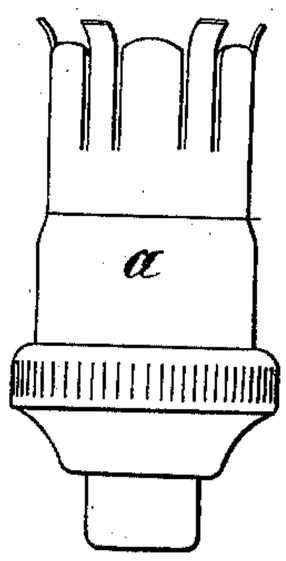

Fig. 8.

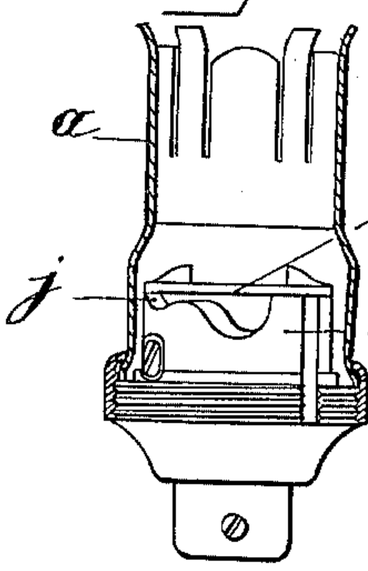

Fig. 10.

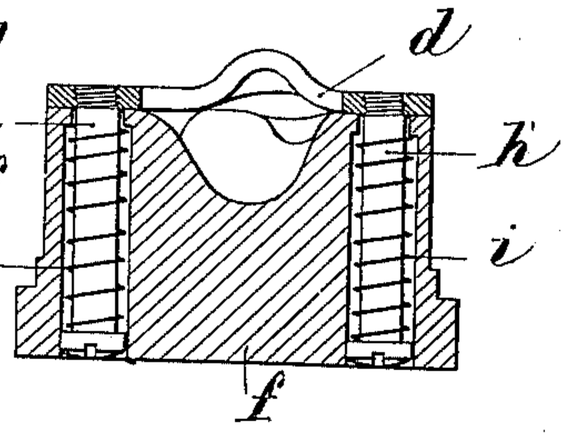

Fig. 9.

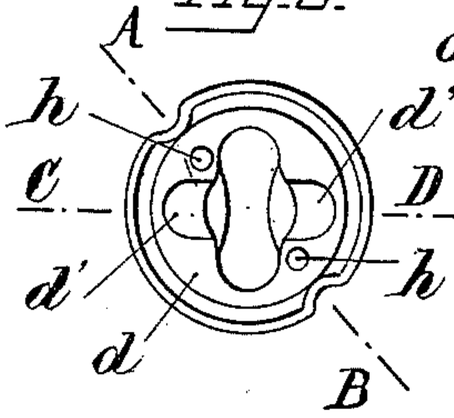

Fig. 11.

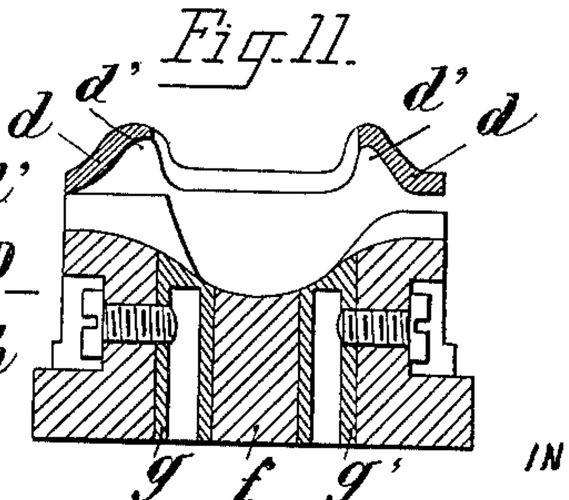

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Fig. 12.

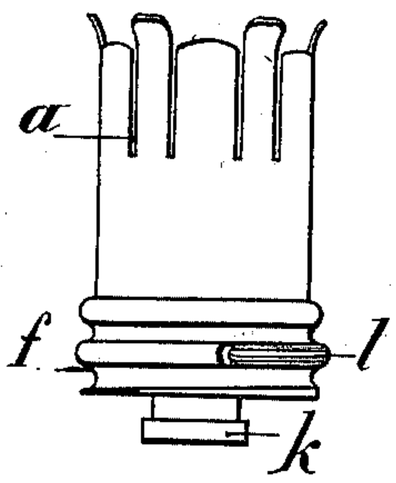


Fig. 13.

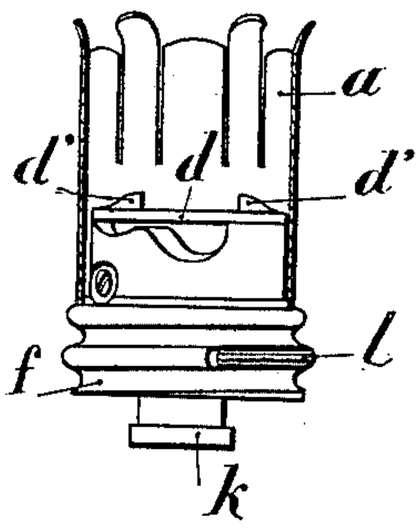


Fig. 15.

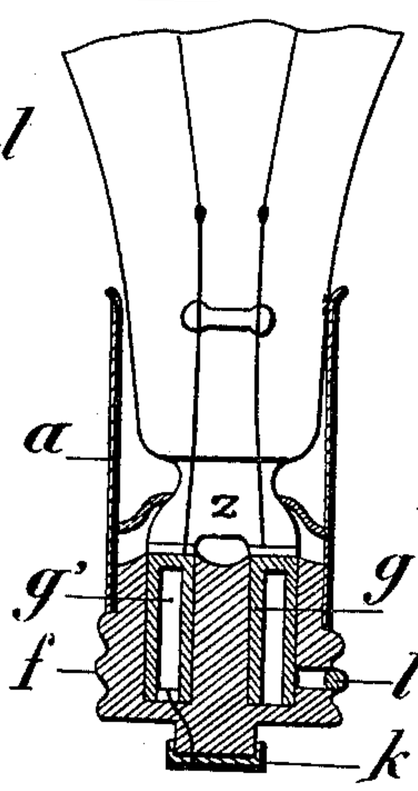


Fig. 14.

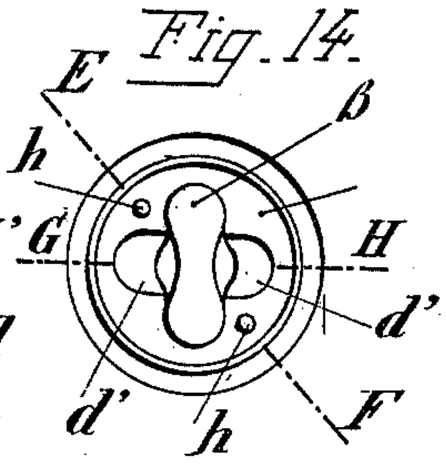


Fig. 16.

Fig. 17.

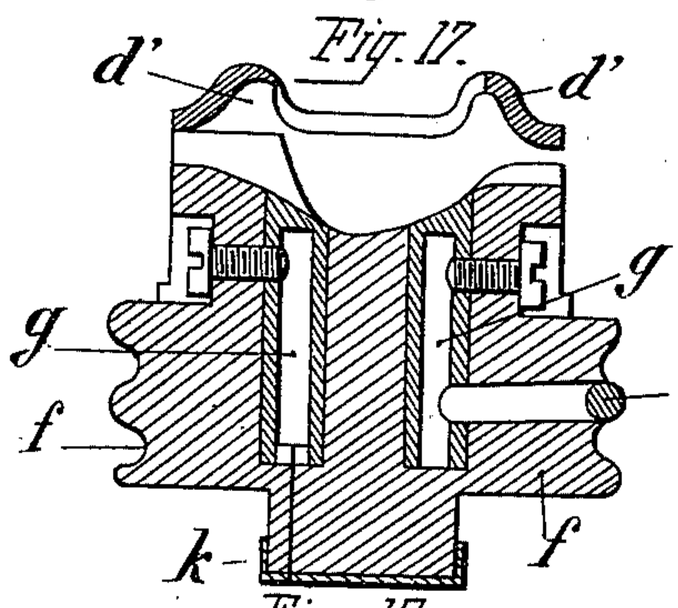


Fig. 18.

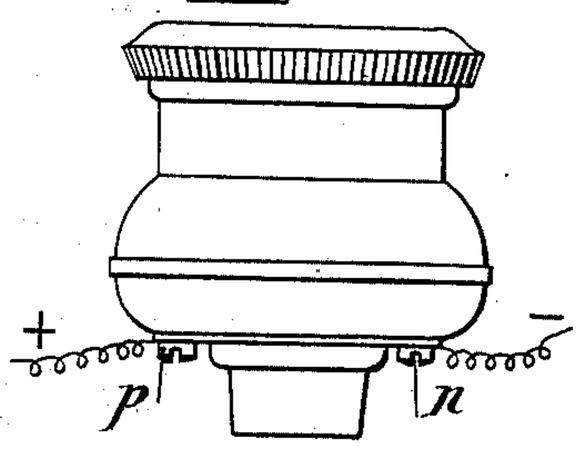
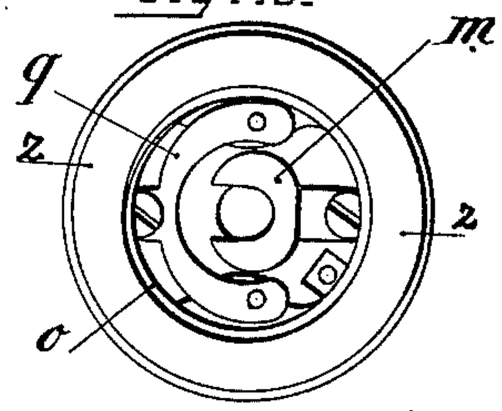


Fig. 19.



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LOUIS JEAN PAUL HOLLUB AND HENRY MIGNAL, OF PARIS, FRANCE.

ELECTRIC INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 672,642, dated April 23, 1901.

Application filed November 8, 1900. Serial No. 35,873. (No model.)

To all whom it may concern:

Be it known that we, LOUIS JEAN PAUL HOLLUB, engineer, of 17 Avenue Rapp, and HENRY MIGNAL, gentleman, of 31 Rue Richer, Paris, in the Republic of France, have invented Improvements Relating to Electric Incandescent Lamps, of which the following is a full, clear, and exact description.

This invention relates to improvements in fittings for incandescent electric lamps, and comprising a T-piece which it is only necessary to rotate through ninety degrees in order to fix it in or release it from a socket provided with a diaphragm having an oblong aperture through which this T-piece is adapted to pass.

In order that our invention may be readily understood and carried into effect, we will describe the same fully with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of a portion of a lamp embodying our invention and provided with the T-shaped fitting. Fig. 2 is an external view of an improved socket. Fig. 3 is a vertical section, and Fig. 4 a plan view, of the same. Fig. 5 is a detail view in elevation of an improved device forming part of our improved socket. Fig. 6 is a plan view of the same. Fig. 7 represents in elevation a modified form of socket; and Fig. 8 is a vertical section, and Fig. 9 a plan view, of the same. Fig. 10 is a detail view, in section and upon a larger scale, of a part which constitutes a portion of the socket represented in Figs. 7, 8, and 9, this section being taken on the line A B of Fig. 9. Fig. 11 represents the same part as shown in Fig. 10, but in section on the line C D of Fig. 9. Fig. 12 is an elevation of a modified form of socket with a screw attachment for mounting in a socket which forms a nut. Fig. 13 shows in vertical section the modified form of fitting represented in Fig. 12. Fig. 14 is a corresponding plan view. Fig. 15 shows a lamp provided with a T-shaped fitting mounted in the socket and the attachment represented in Fig. 13. Fig. 16 shows, upon a larger scale and in section on the line E F of Fig. 14, the fitting shown in elevation in Figs. 12 and 13. Fig. 17 shows the same fitting in section on the line G H of Fig. 14. Fig. 18 shows in elevation a screw-socket, into which is screwed the fitting represented in Figs. 12, 13, 14, 16, and 17. Fig. 19 shows the same socket in plan.

As shown in the drawings, the improvements which we have introduced into the mounting of incandescent electric lamps provided with a T-shaped part *z*, as represented in Fig. 1, and which are adapted to be fixed by engaging this T-piece in an oblong aperture B, Fig. 4, and then rotating it through ninety degrees in order that this T-piece may be engaged beneath a diaphragm *d*, consist in providing the sockets *a*, Figs. 2 to 6, above the spring-contacts *b* with a disk of insulating material *c*. The T-piece of the lamp bears against this disk when it is engaged or disengaged from the diaphragm *d* in such a manner that the lamp is always guided. For this purpose the disk *c* is traversed by two small metal cylinders *e*, in which the spring-contacts *b* are engaged. This establishes an electric contact between the contact-pieces of the attachment and those of the lamp. With this arrangement there is no danger of fracturing the T-piece of the lamp in rotating it, which might happen if the disk were not provided, as the wings of the T-piece might engage between the two contacts *b* of the support.

In Figs. 7 to 11 we have shown a modification of the service which obviates the liability of fracturing the T-piece of the lamp. This modification comprises a mass of insulating material *f*, provided with two metal cylinders *g g'*, in which are engaged the wires of the electric circuit. The diaphragm *d* instead of being fixed in the socket *a* is provided with two guide-rods *h*, with springs *i*. In this manner the diaphragm *d* is movable, owing to the elasticity of the springs, so that on introducing the T-piece of the lamp into the aperture B of the diaphragm and on rotating it this latter assumes a perpendicular position, raising the diaphragm slightly. The wings of the T-piece enter cavities *d'* of the diaphragm and notches *j*, Fig. 8, formed in the contacts *g* in such a manner that this T-piece may be manipulated without danger of fracturing it.

In the modification represented in Figs. 12 to 19 the T-piece also engages in an oblong aperture formed in a disk *d*. The lamp is then

rotated through ninety degrees, as above stated; but the specialty of this modification is the arrangement of the support *f*, of insulating material, in order to permit of its being fixed in the screw-socket, Figs. 18 and 19. With this object the support *f* is screw-threaded and comprises a metal base *k*, which is electrically connected to the contact *g*, while the contact *g'* is electrically connected to a metal wire *l*, which completes a portion of the screw-thread which is removed upon the support. The support thus constituted screws into the socket *z*, Figs. 18 and 19. The base *k* is in contact with the spring *m*, arranged in the bottom of the socket and in electrical communication with a metal liner *o*, arranged within the socket and screw-threaded. This liner receives the current coming from the terminal *p* by the intermediary of a part *q*.

The forms, details, accessories, materials, and dimensions of the various devices serving to constitute our improved lamp may of course be varied without thereby affecting the principle of our invention.

We claim—

1. The combination with a lamp having a T-shaped head, of a socket, a disk or diaphragm therein with a central opening to receive said head, said head interlocking with the diaphragm when the parts are given a quarter-turn, an insulating-body arranged below the said disk and contacts carried by said body, the heads of the contacts being flush or substantially flush with the top of said body whereby said T-shaped head is prevented from entering between the contacts and being broken when turned to interlock the parts, substantially as described.

2. The combination with a lamp having a T-shaped head, of a socket, a disk or diaphragm therein having an opening through which the head can pass to interlock with the under side of the disk, an insulating-body arranged beneath the disk and contacts carried thereby, said disk and insulating-body having movement relative to each, the heads of said contacts being flush or substantially flush with the top of said body, substantially as described.

3. The combination with a lamp having a T-shaped head, of a socket, a disk or diaphragm therein having an opening through which the head can pass to interlock with the under side of the disk, an insulating-body arranged beneath the disk, and contacts carried thereby, and springs for drawing the disk toward said insulating-body, substantially as described.

4. The combination with a lamp having a T-shaped head, of a socket, a disk therein adapted to interlock with said head, an insulating-body below the disk, contacts carried thereby, a stem at the end of said socket, electrical connection from one contact to said stem, the insulated portion having a threaded periphery, a wire forming one of said threads, an electrical connection between the wire and said contact, and a second socket, having a liner adapted to form a contact with said wire, and a plate in the bottom of the second socket adapted to form a contact with said stem, substantially as described.

The foregoing specification of our improvements relating to electric incandescent lamps signed by us this 25th day of October, 1900.

LOUIS JEAN PAUL HOLLUB.
HENRY MIGNAL.

Witnesses:
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MAURICE H. PIGNET.