

No. 693,087.

Patented Feb. 11, 1902.

J. W. H. UYTENBOGAART.
SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

(Application filed May 2, 1901.)

(No Model.)

Fig. 1.

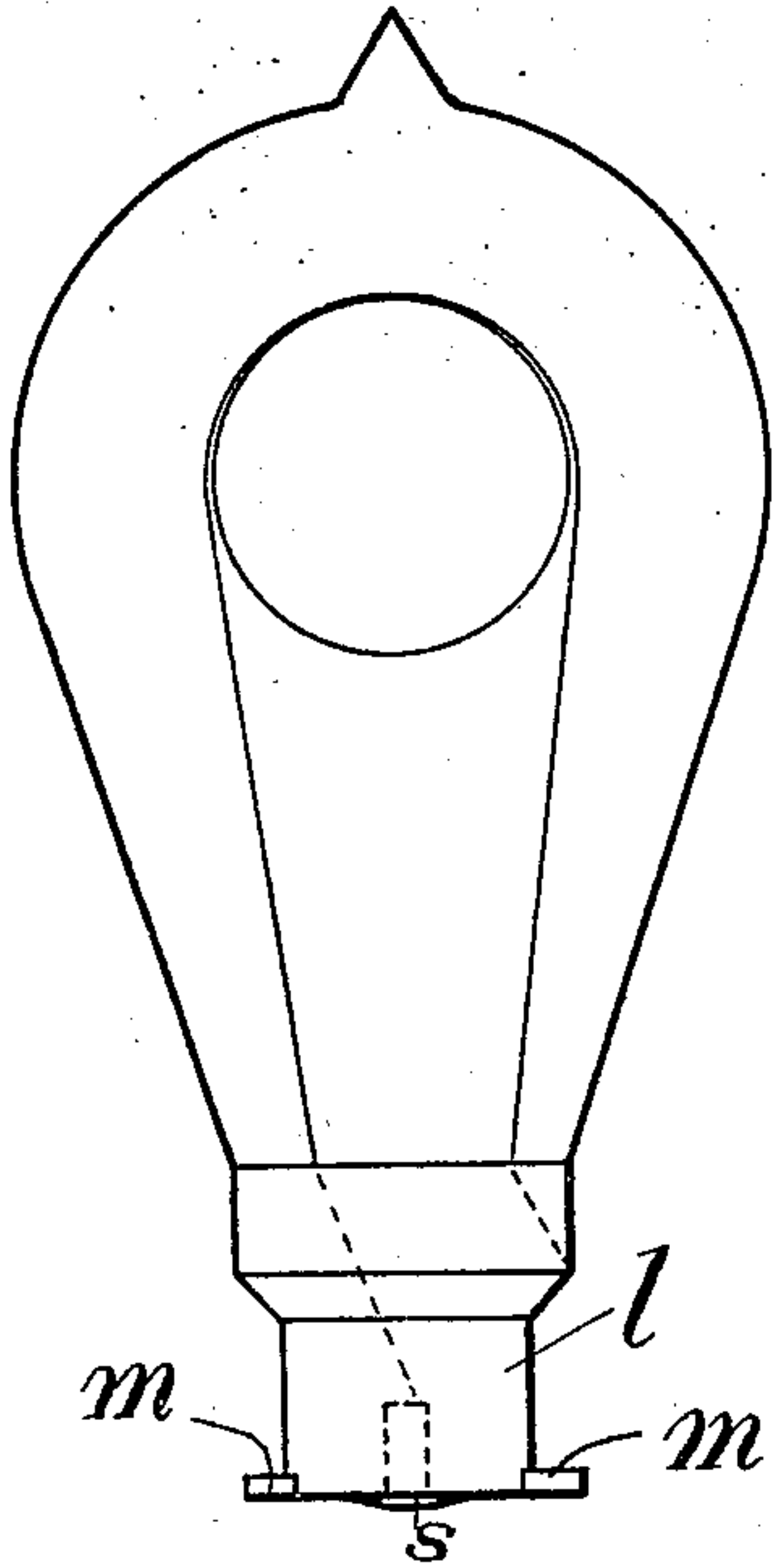


Fig. 2.

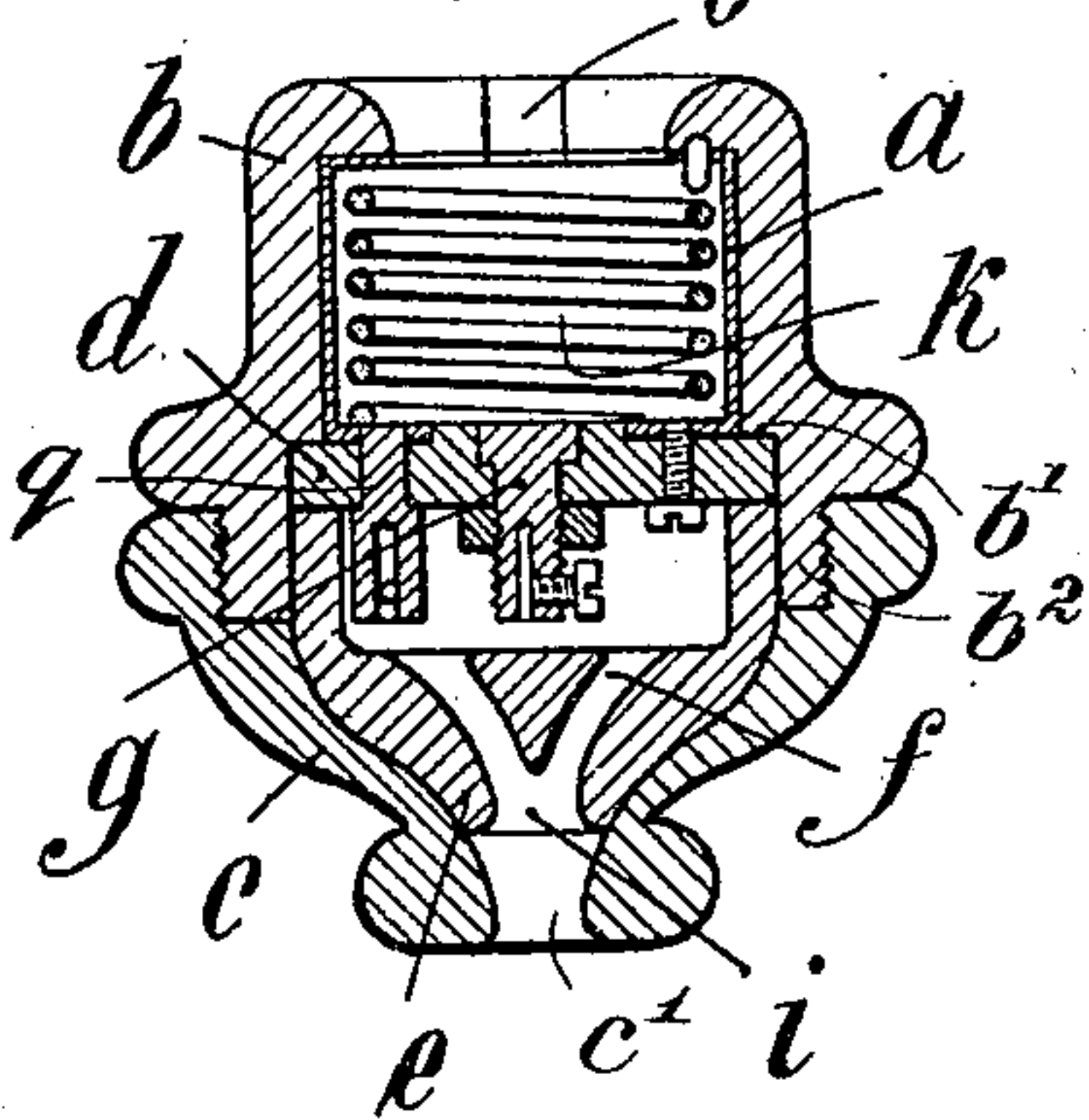


Fig. 3.

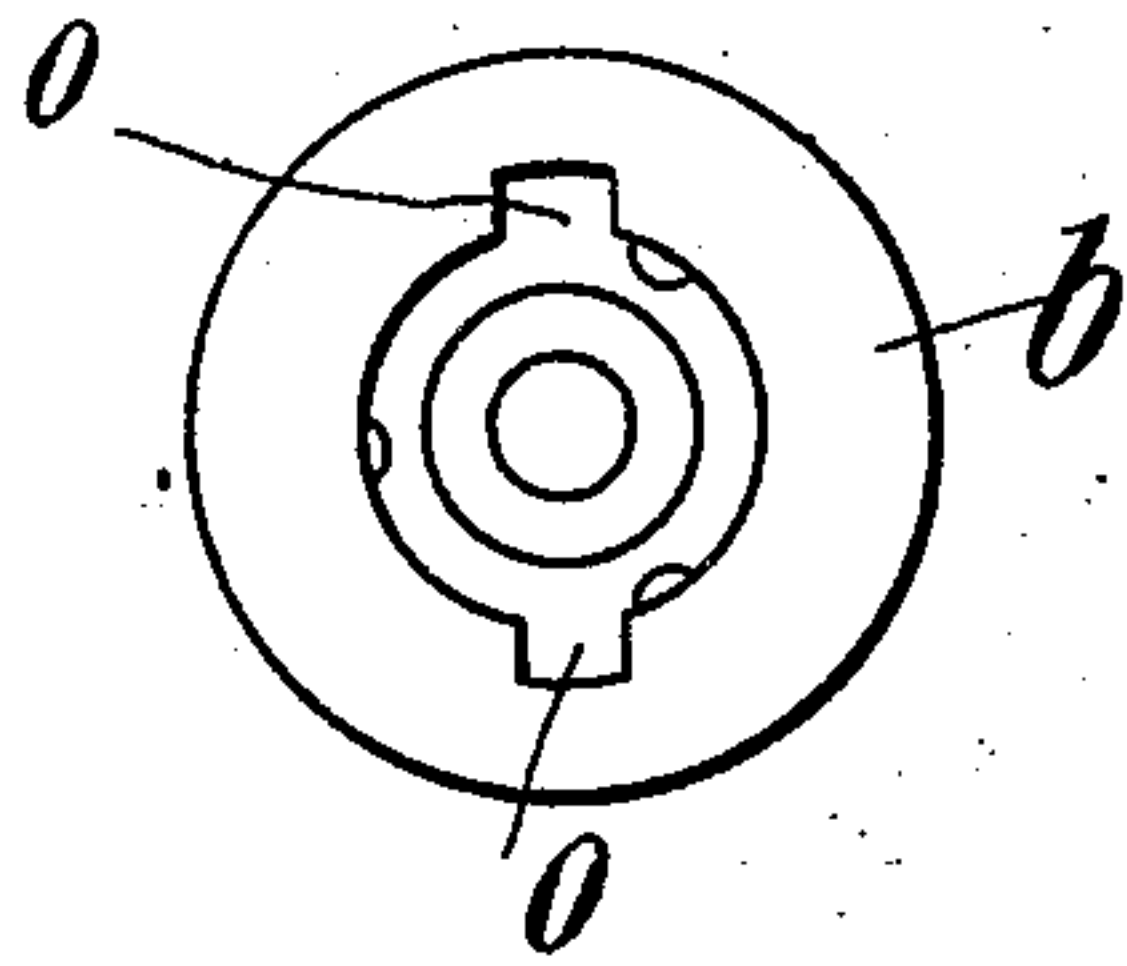


Fig. 4.

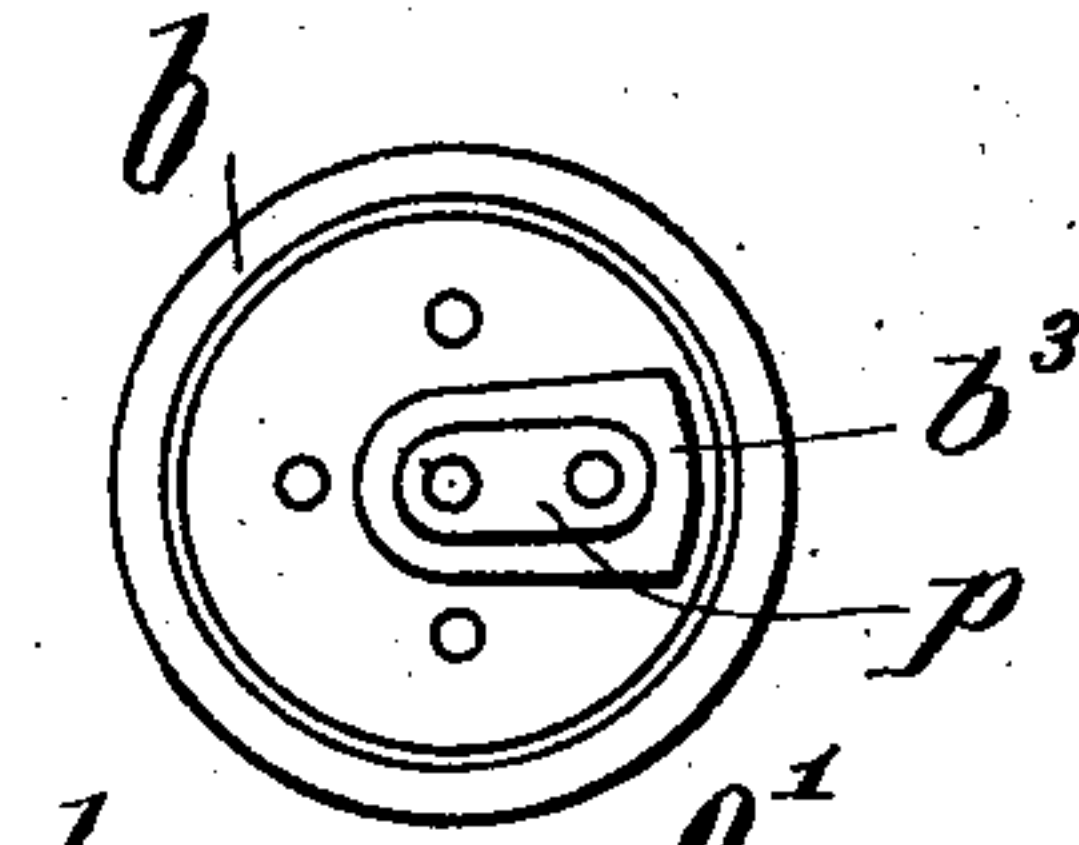


Fig. 5.

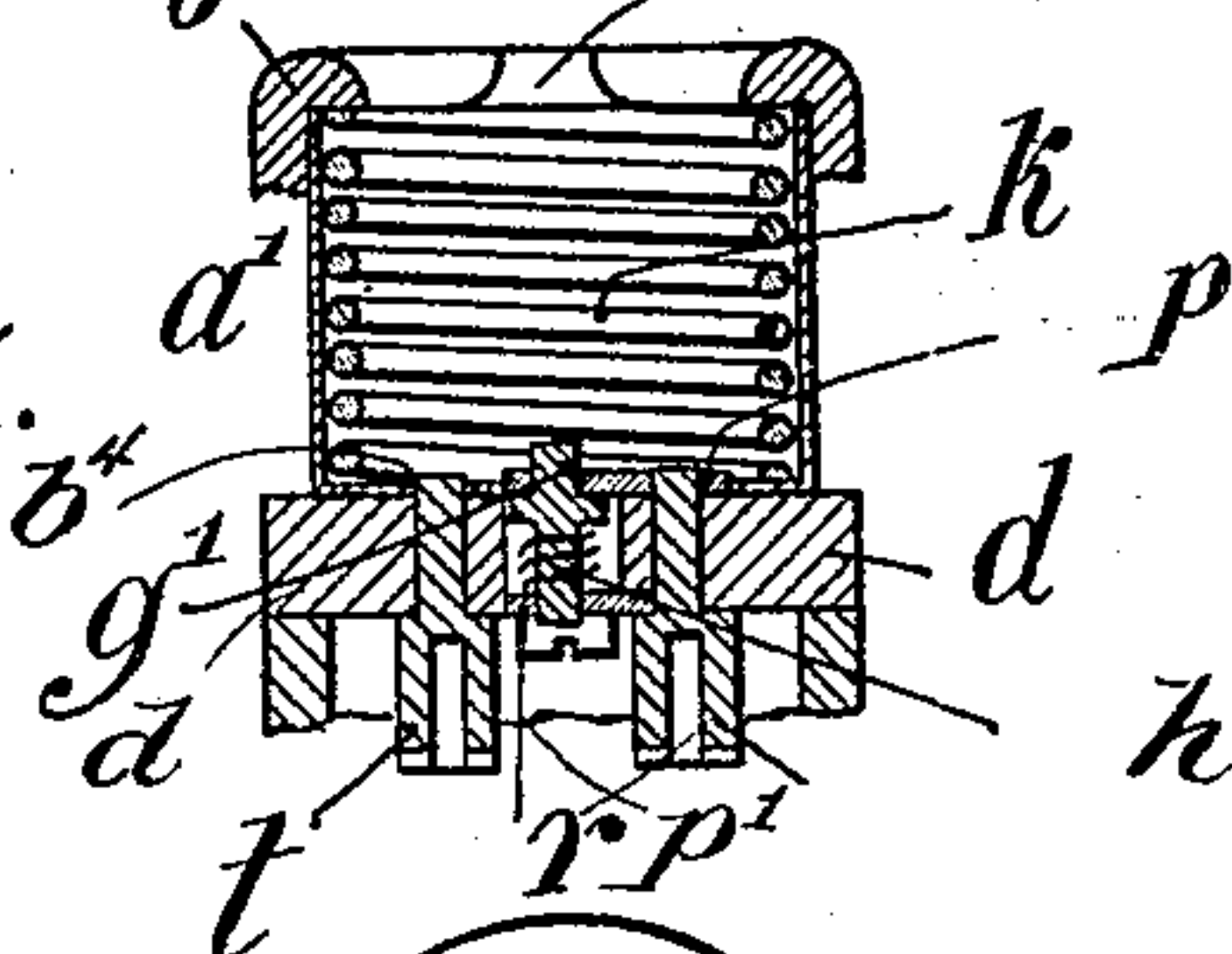
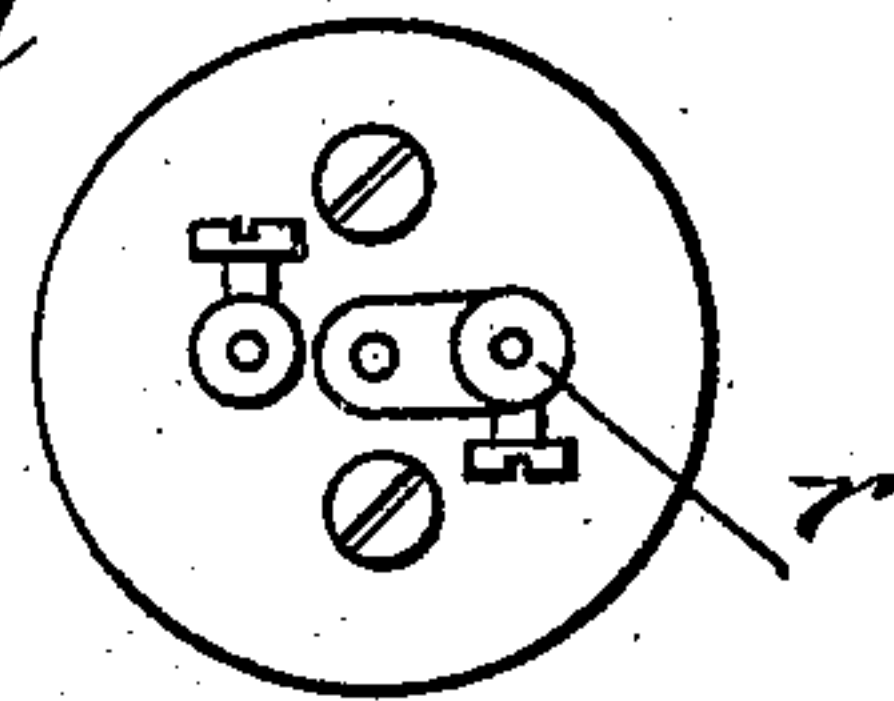


Fig. 6.



Witnesses:-

John W. H. Uytenga
F. Munkor

Inventor:-

Johannes Wilhelmus Uytenga
Uytenga

by *Eustace W. Hopman*
Attorney

UNITED STATES PATENT OFFICE.

JOHANNES WILHELMUS HUYBERTS UYTENBOGAART, OF UTRECHT,
NETHERLANDS.

SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 693,087, dated February 11, 1902.

Application filed May 2, 1901. Serial No. 58,535. (No model.)

To all whom it may concern:

Be it known that I, JOHANNES WILHELMUS HUYBERTS UYTENBOGAART, a subject of the Queen of the Netherlands, and a resident of Utrecht, Netherlands, have invented certain new and useful Improvements in Sockets for Incandescent Electric Lamps, of which the following is a full, clear, and exact description.

The present invention relates to sockets for incandescent electric lamps; and it consists of the details of construction hereinafter set forth, and particularly pointed out in the claims.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a side elevation of the lamp with its mounting adapted to engage the socket. Fig. 2 is a vertical section through the socket, and Fig. 3 a plan view of the socket. Figs. 4 to 6 show a modified form of the socket, Fig. 4 being a plan view of the socket, Fig. 5 a part vertical section through the same, and Fig. 6 a view of the contact-screws seen from underneath the socket.

The lamp is provided with the mounting of the usual construction, as indicated at *l*, and having two projecting pins *m m* advantageously arranged diametrically opposite to each other and adapted to engage the socket, as hereinafter set forth.

The socket proper consists of the upper sleeve *b*, having an inwardly-projecting upper flange and a metallic lining *a*, preferably flanged inwardly advantageously at the top and bottom, so as to close against the inner walls of the socket *b*, which is of porcelain or other suitable non-conducting material. Beneath the lower flange of the lining *a* the socket *b* is provided with an enlargement or shoulder *b'* and with an externally-screw-threaded extension *b²*, to which is attached a cap *c*, of porcelain or the like, said cap having a lower opening *c'*, through which the electric conductors pass. A plate *d*, of non-conducting material, is fitted within the lower end of the socket *b* against the shoulder *b'* and lies against the underside of the bottom inwardly-turned flange of the lining *a*, which lining is

of conducting material, as will be readily understood. This plate *d* is supported on an inner cap *e*, of non-conducting material, said inner cap being provided with openings *f* and *i* for the conductors, which are passed through the same to the contact-screws *g* and *q*, the former of which is centrally arranged, while the latter is in contact with the lower flange of the lining *a*. Within the latter a spiral or helical spring fits, its lower end or coil resting on the lower flange of the said lining and its upper end against the under side of the upper lining-flange. The inwardly-turned flange of the socket *b* is provided with two slots *o o*, preferably at diametrically opposite points of the same, through which the projections *m m* of the lamp sleeve or mounting are passed when the lamp is fitted into the socket. The central contacts of the lamp project slightly below the under surface of the lamp end to render the contact between the said projection and the contact-screw *g* absolutely safe. The lower end of the spring *k* is tapered to lie flat on the flange of the lining.

The device operates in the following manner: In fitting the lamp into the socket the projections *m m* are placed in the recesses *o o* and the socket turned. The coils of the spring *k* act as screw-threads as the projections are screwed into the socket and guide the lamp-sleeve properly into the socket. When the parts have been properly joined and the contact made, the spring *k* will yield if the lamp is turned too far, and the lamp may be continually turned in its socket, so that with the present construction there is no danger whatever of tearing off a screw-thread or of breaking the lamp-glass or straining the parts in any way by overscrewing the lamp-stem when the same is screwed into the socket. If it is desired to unscrew the lamp, it is only necessary to turn it in the opposite direction, and the gradually-inclined lower end of the spring will allow the projections of the lamp-stem to pass again between the coils of the spring, so that the lamp may be easily disengaged from the socket at will.

In Figs. 4 to 6 the device is slightly modified in that the under corner of the recesses *e'* is rounded off, while the lining *a'* is not provided with the upper and lower flanges, the

spring being simply supported between the flange of the socket *b* and a bottom plate *b*⁴, with which the lining is provided. This plate extends over the whole of the plate *d* within the lining, with the exception of the recessed part *b*³. Within this recess on the plate *d*, but not contacting with the bottom plate *b*⁴, is mounted a contact-plate *p*, and a corresponding plate *p'* is mounted at the under surface of the said plate *d*, the two plates being connected by the contact clamping-screw *r* for the conductors. The central contact-pin *g'* passes through both plates *p p'* and is provided with a spring *h*, supported above the lower plate of the contact-plates *p p'* and below a flange on the said pin *g'*. This spring is sufficiently strong to carry the lamp so that it will not rest entirely on the contact-plate *p*, but be carried slightly above the same.

This arrangement has the advantage that the lamp-stem will be carried between the two springs *k* and *h*, and thus it will be protected against vibration to a very great extent, and yet the contact will always be kept closed by the spring *k*, which is in contact always with some part of the lining *a'* and the spring contact-pin *g'*, which is always in contact with one or other of the plates *p p'*, to which the other pole of the circuit is connected.

I claim as my invention—

1. In a socket for electric incandescent

lamps, the combination of a helical spring and means for retaining the same loosely within the socket, and a pair of lugs on the lamp-stem to screw into said spring in the manner and for the purpose substantially as described. 35

2. In a socket for electric incandescent lamps the combination of an inwardly-turned flange at the mouth of the socket, a helical spring within said socket and retained by said flange, said spring being free to rotate, recesses in the said flange and lugs on the stem of the lamp adapted to be passed through said recesses and engage the spring in the manner and for the purpose substantially as described. 40 45

3. In a socket for electric incandescent lamps, the combination of a spring loosely located within the socket and serving as a screw-thread to guide the lugs of the lamp-stem into proper engagement with the socket-contacts, and a central spring-pressed contact-pin having a spring sufficiently strong to hold the lamp just above the bottom plate of the socket when the same has been screwed home substantially as described. 50 55

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHANNES WILHELMUS

HUYBERTS UYTENBOGAART.

Witnesses:

AUGUST SIEGFRIED DOCEN,
NICOLAAS ALADINUS DE BEER.