

(No Model.)

H. LEMP & M. J. WIGHTMAN.

DEVICE FOR HOLDING INCANDESCENT LAMP FILAMENTS WHILE THE
SAME ARE BEING FLASHED.

No. 366,673.

Patented July 19, 1887.

Fig. 1,

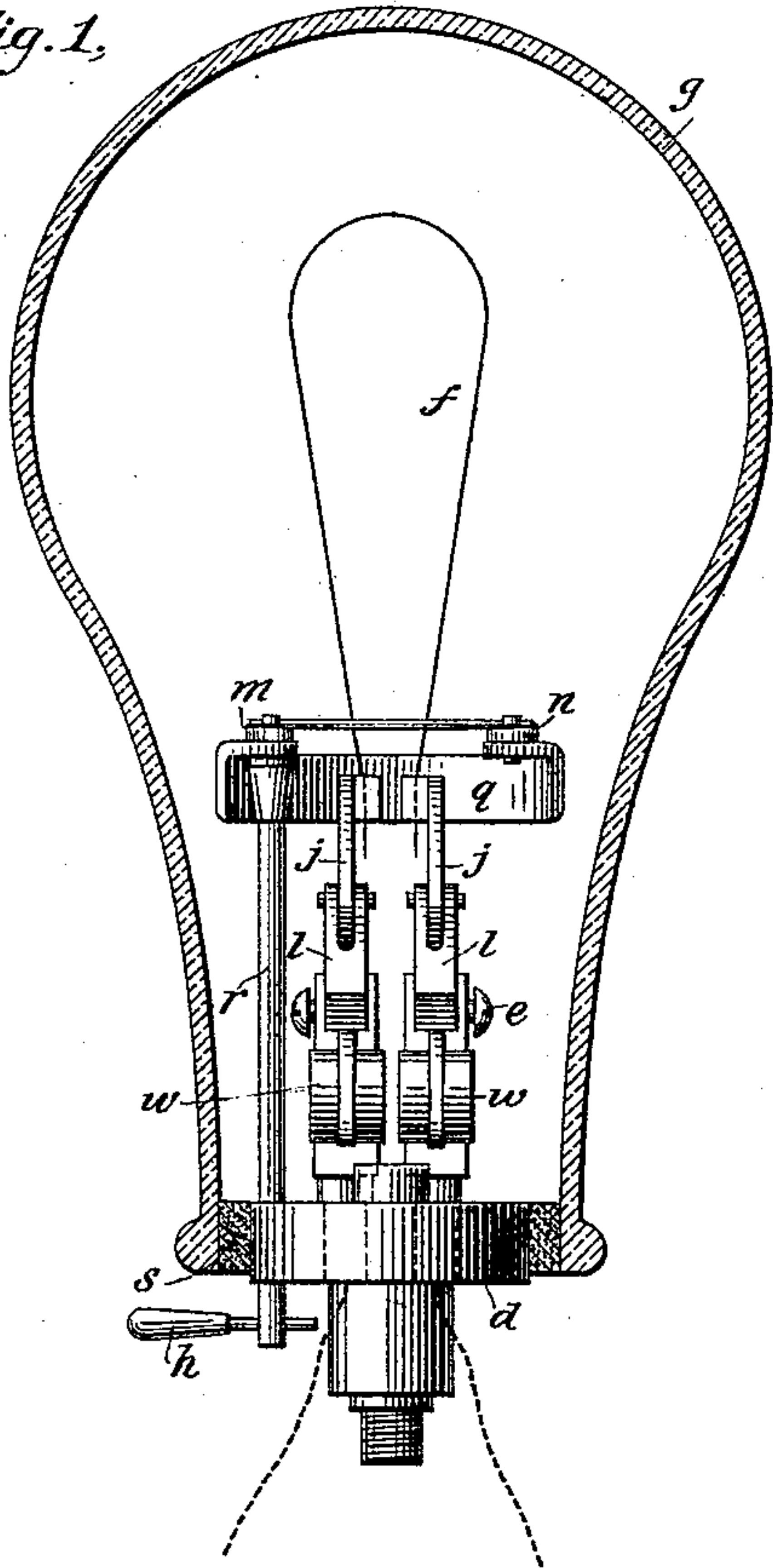


Fig. 2,

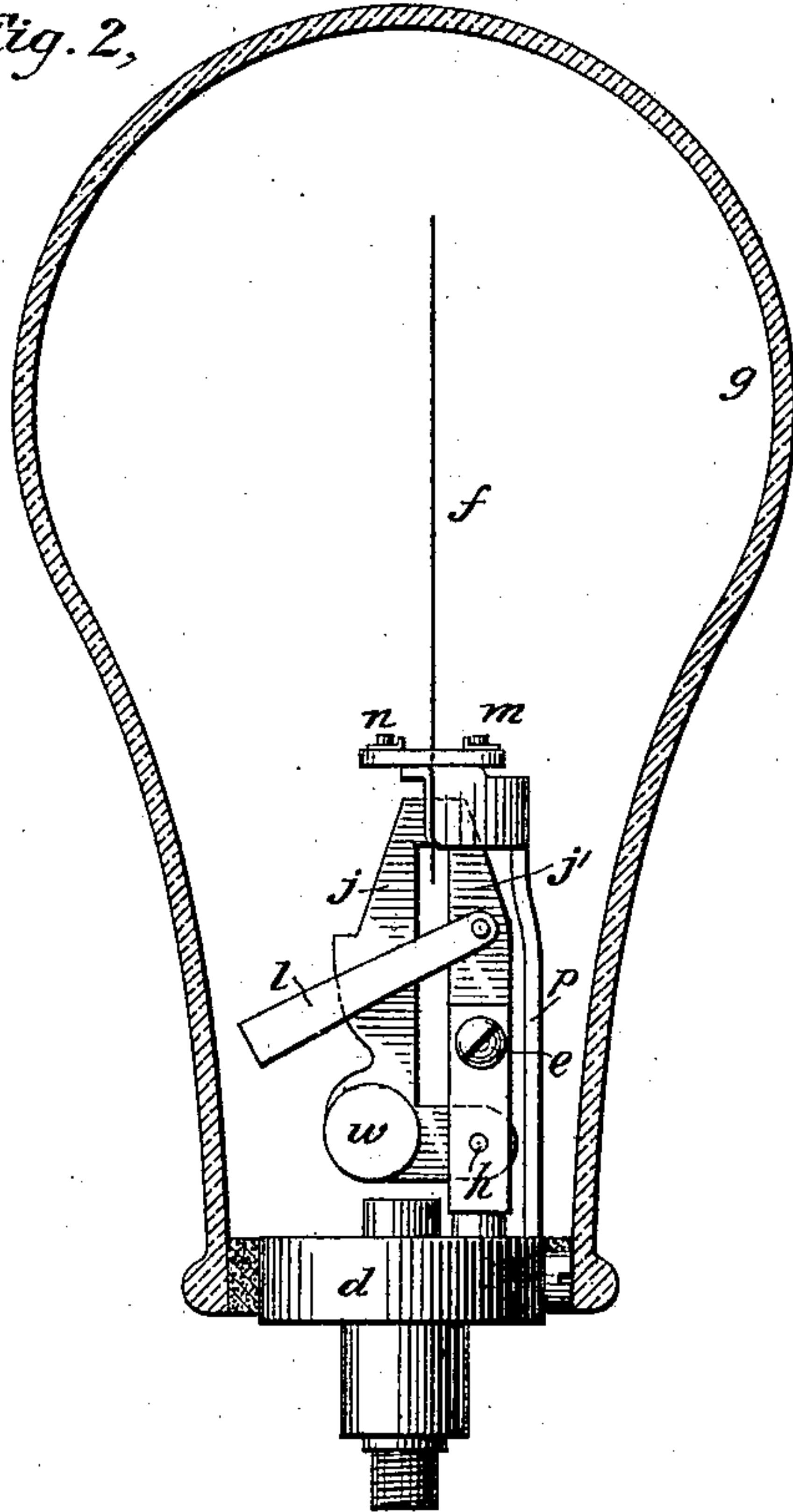


Fig. 3,

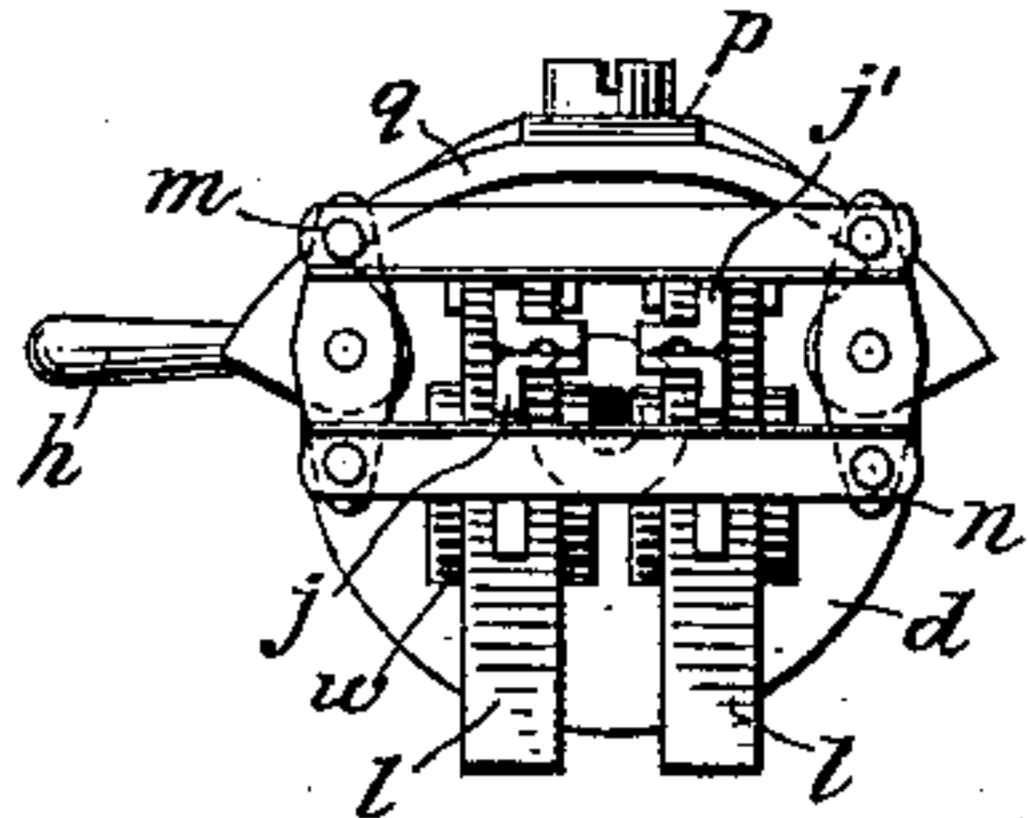


Fig. 4,

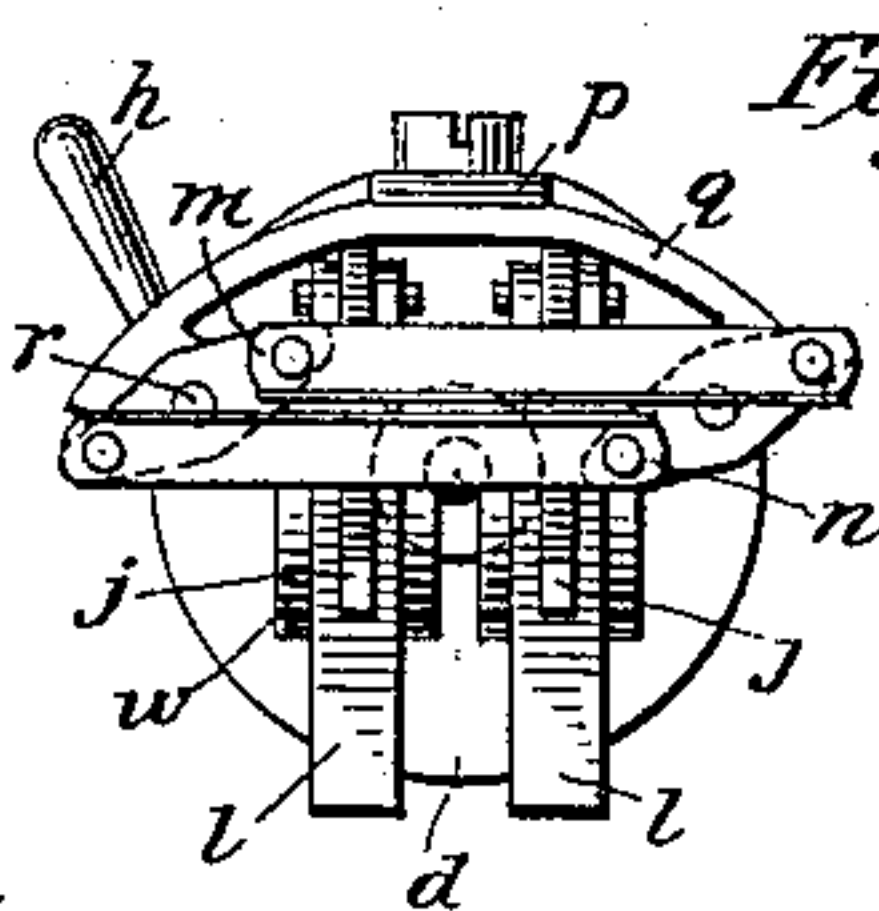
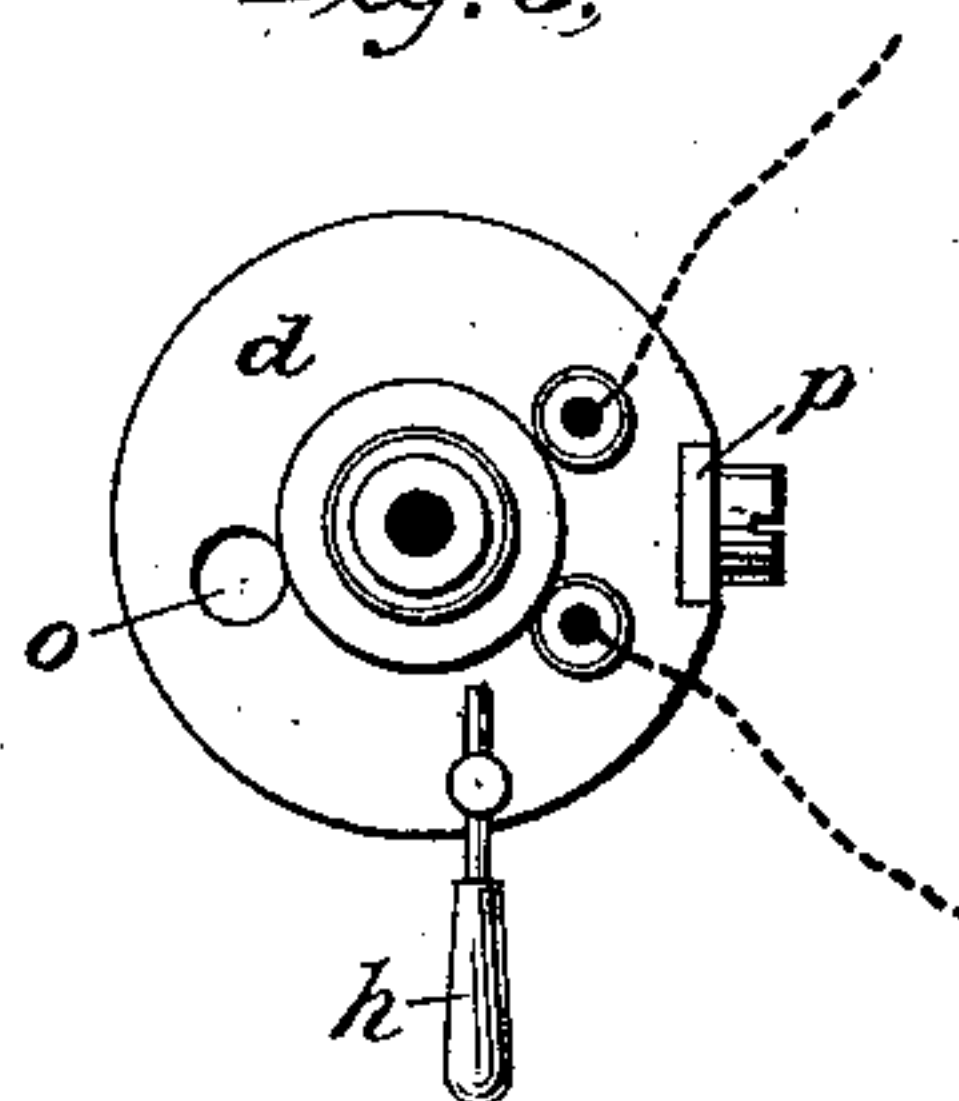


Fig. 5,



Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR HOLDING INCANDESCENT-LAMP FILAMENTS WHILE THE SAME ARE BEING FLASHED.

SPECIFICATION forming part of Letters Patent No. 366,673, dated July 19, 1887.

Application filed August 19, 1886. Serial No. 211,317. (No model.)

To all whom it may concern:

Be it known that we, HERMANN LEMP and MERLE J. WIGHTMAN, citizens of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Device for Holding Filaments for Incandescent Electric Lamps While Flashing the Same, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same.

The object of our invention is to construct a device for the above purpose by which such filaments may be readily and expeditiously held in place and kept in the circuit while flashing the same and be as easily removed therefrom. It has also for its object to provide means whereby the ends of the filament may receive a larger deposit than the main portion of the filament, so that it can be successfully fastened to the metallic terminals of the lamp.

The invention consists of two movable and two fixed jaws adapted to clamp the filament, having means for locking the same together and also apart, suitably insulated and provided with line-connections, the whole being incased in a receptacle which is suitably sealed; and it consists, also, in certain means, to be pointed out in the claims, for short-circuiting the main portion of the filament, while leaving the ends in circuit, so as to secure a larger contact-surface at the ends when they are joined to the metallic terminals of the lamp, which, as is well known, is very desirable in incandescent lamps; and it consists, also, in details of construction, which will be hereinafter claimed.

In the accompanying drawings, forming part of this specification, in which like letters of reference indicate like parts in the several figures. Figure 1 represents a front elevation of our invention. Fig. 2 represents a side elevation thereof; Fig. 3, a plan view of our device, showing the short-circuiting devices for the main portion of the filament in their normal position. Fig. 4 shows the same view of the same parts with the short-circuiting devices in their operative position—that is, in contact

with the filament; and Fig. 5 shows a bottom view of our device.

f designates the filament, which is designed to be clamped by two pairs of jaws, *j j'*, the former pivoted to the support of the latter at the point *h* by means of a metal piece, *a*, which carries weights *w w* for opening these jaws when the locking-levers *l l*, which are pivoted to the fixed jaws *j' j'* and embrace the movable jaws *j j*, are raised. These locking-levers engage a curved portion of the jaws *j j* and clamp the filament firmly when they are forced downward, but engage a notch in these jaws when said levers are raised, so as to hold the jaws apart. The fixed jaws *j' j'* are carried by and secured to metal pieces mounted upon the circular base *d*, which are suitably insulated therefrom, and which metal pieces have screws *e e* for holding the fixed jaws in place.

The cylindrical base *d* is provided with a metal extension having a screw-thread by which it may be secured in place. Upon this base is also mounted a flat metal post, *p*, which is secured thereto by a screw and carries at its upper part a circular body, *q*, provided with ears, upon which are pivoted metal pieces carrying at each side pivots for the contact-bars *m n*, forming a sort of a toggle-joint. The metal piece to the left (shown in Fig. 1) is rigidly connected to a rod, *r*, which passes through the base *d*, and has a handle, *h*, extending therefrom, by which the contact-bars can be operated. The base *d* has also a hole, *o*, in it, which may be used for admitting the hydro-carbon vapor to the globe *g*, within which the entire device is designed to be sealed.

We have shown the globe sealed by sealing material, *s*, about the base *d*; but it may be sealed anywhere, and is only shown sealed at this point to represent the apparatus ready for operation.

The metal pieces carrying the fixed jaws are provided with line-connections, as shown, and are suitably insulated from the base *d*.

The operation of the apparatus is as follows: The globe *g* is removed, the locking-levers are raised, the filament having been previously taken hold of, the movable jaws then open and

are locked apart from the fixed jaws by the engagement of the notch in the movable jaws and the locking-levers. The filament is thereupon removed, and the device is ready to receive another for flashing, which is placed in a groove in the fixed jaws. (Shown in Fig. 3.) The levers *j j* are then pushed forward and made to bear upon the filament, whereupon the locking-levers *l l* leave the notch in these jaws and engage the curved portion of the jaws. The levers are then forced down, so as to make the jaws firmly clamp the filament, the circuit in the meantime having been broken by a switch located near by. The globe *g* is now placed over the device and sealed. The current is now turned upon the filament within the globe, which is previously filled with the hydrocarbon gas. The filament is flashed until the desired cross-section is reached, whereupon the handle *h* is manipulated, so as to bring the contact-bars in contact with the filament, thus short-circuiting the light-giving portion of the filament and leaving its ends in the circuit. The current continues to flow from the jaws through the end portions and contact-bars until a sufficient deposit is secured upon these end portions, when the current is taken off and the filament removed, as before.

We do not wish to confine ourselves to the exact construction and arrangement of devices shown, as the devices may be varied in many ways without departing from the spirit of our invention.

What we desire to claim and secure by Letters Patent is—

1. In a device for holding filaments for incandescent lamps while the same are being prepared, the combination of gravity operating, movable, and fixed jaws, means for locking the same together, and a part to clamp or unclamp the filament, and line-connections for each pair of jaws, which are suitably insulated from each other.

2. In a device for holding incandescent-lamp filaments while the same are being flashed, the combination of two fixed jaws, two movable jaws, gravity-levers for each pair of jaws for locking the movable to the fixed jaws to clamp the filament, and line-connections for each pair of jaws, which are suitably insulated from each other.

3. In a device for holding incandescent-lamp filaments during preparation, the combination of two stationary jaws insulated from each other and each carrying a movable gravity-jaw for clamping and unclamping the filament, gravity-levers embracing the jaws for locking them

together, and a notch in each gravity-jaw, which engages the locking-levers to hold the levers in their raised position, and line-connections to each stationary jaw.

4. In a device for holding incandescent-lamp filaments during treatment, the combination of two fixed jaws, two movable jaws, locking-levers embracing a curved portion of the stationary jaws for forcing the jaws together to clamp the filament as the locking-levers are made to engage said curved portion.

5. In a device for holding incandescent-lamp filaments while being treated, the combination of gravity operating and fixed jaws adapted to grasp the filament, levers for locking the same together, means for suitably insulating the same, and electrical connections for conveying the current to the filament.

6. In a device for holding incandescent-lamp filaments while being treated, the combination of movable and fixed jaws adapted to grasp the filament, levers for locking the same together and holding them apart, means for suitably insulating the same, and electrical connections for conveying the current to the filament.

7. The combination, with a device for holding incandescent-lamp filaments during flashing, suitably sealed and having electrical connections, of contact devices for short-circuiting the main portion of said filament, while leaving the lower portion in circuit, for the purpose set forth, and means outside of the seal for operating said contact devices at will.

8. In a device for holding incandescent-lamp filaments during flashing, the combination of movable and fixed jaws adapted to clamp the filament, electrical connections, and means for short-circuiting the filament portion proper when desired and leaving the ends thereof in circuit to cause a greater deposit thereon, for the purpose specified.

9. In a device for holding incandescent-lamp filaments during flashing, the combination of movable and fixed jaws, suitable devices for locking the same together and apart, electrical connections, and means for short-circuiting the filament portion proper when desired and leaving the ends thereof in circuit to cause a greater deposit thereon, for the purpose specified.

In testimony whereof we have hereunto set our hands and seals, this 28th day of July, 1886, in the presence of the two subscribing witnesses.

HERMANN LEMP. [L. S.]
MERLE J. WIGHTMAN. [L. S.]

Witnesses:

LOUIS M. SCHMIDT,
WM. E. SHEPARD.