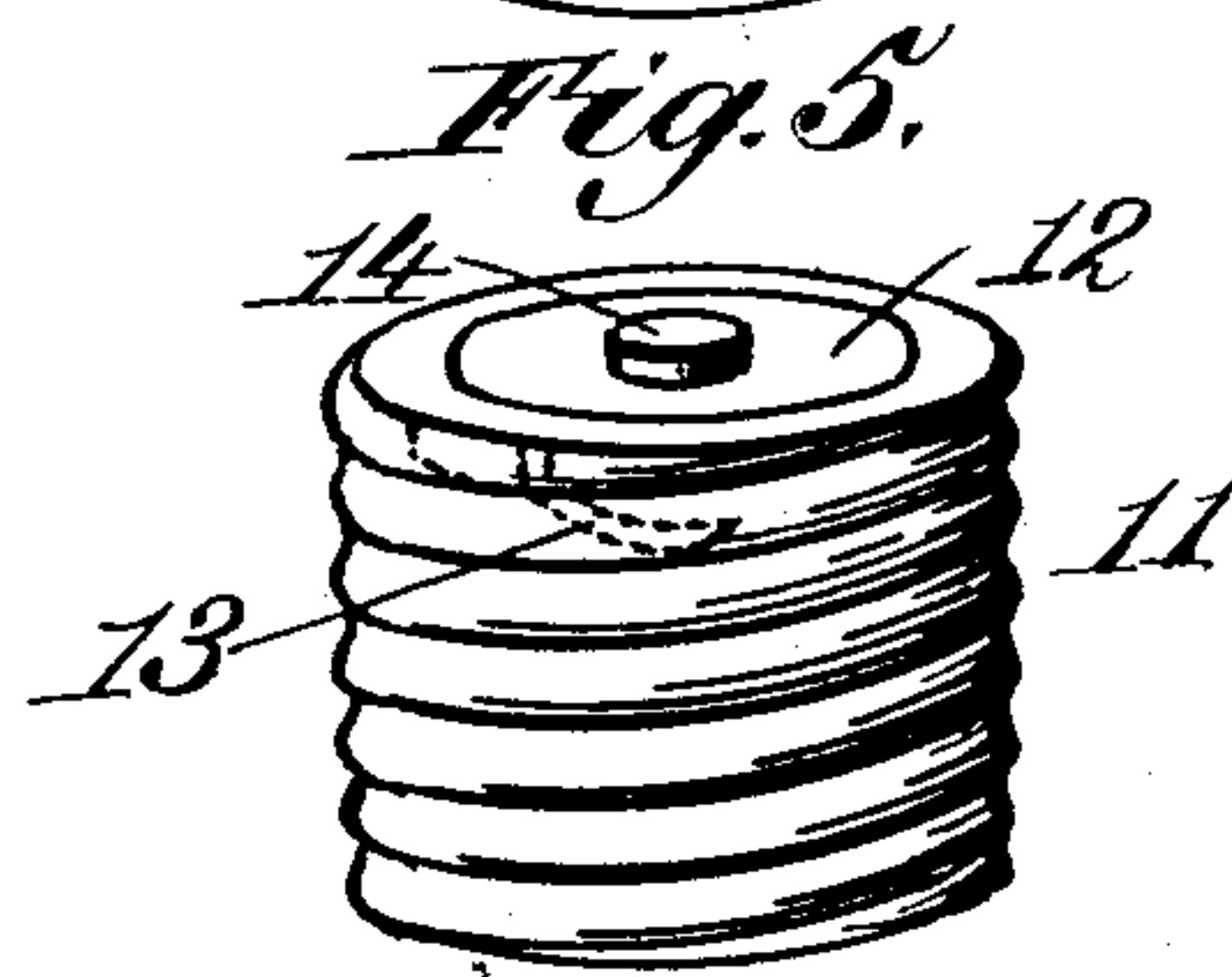
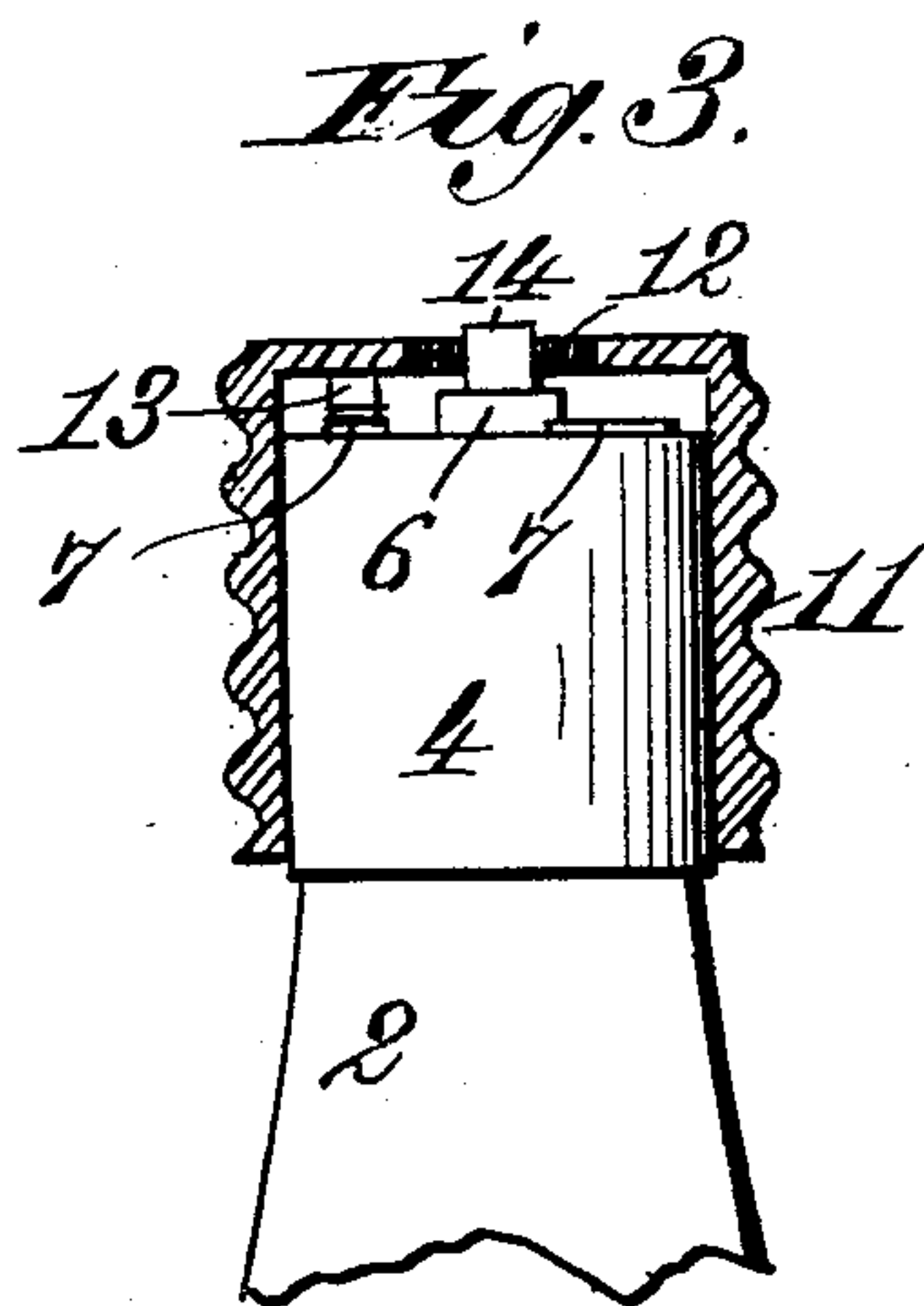
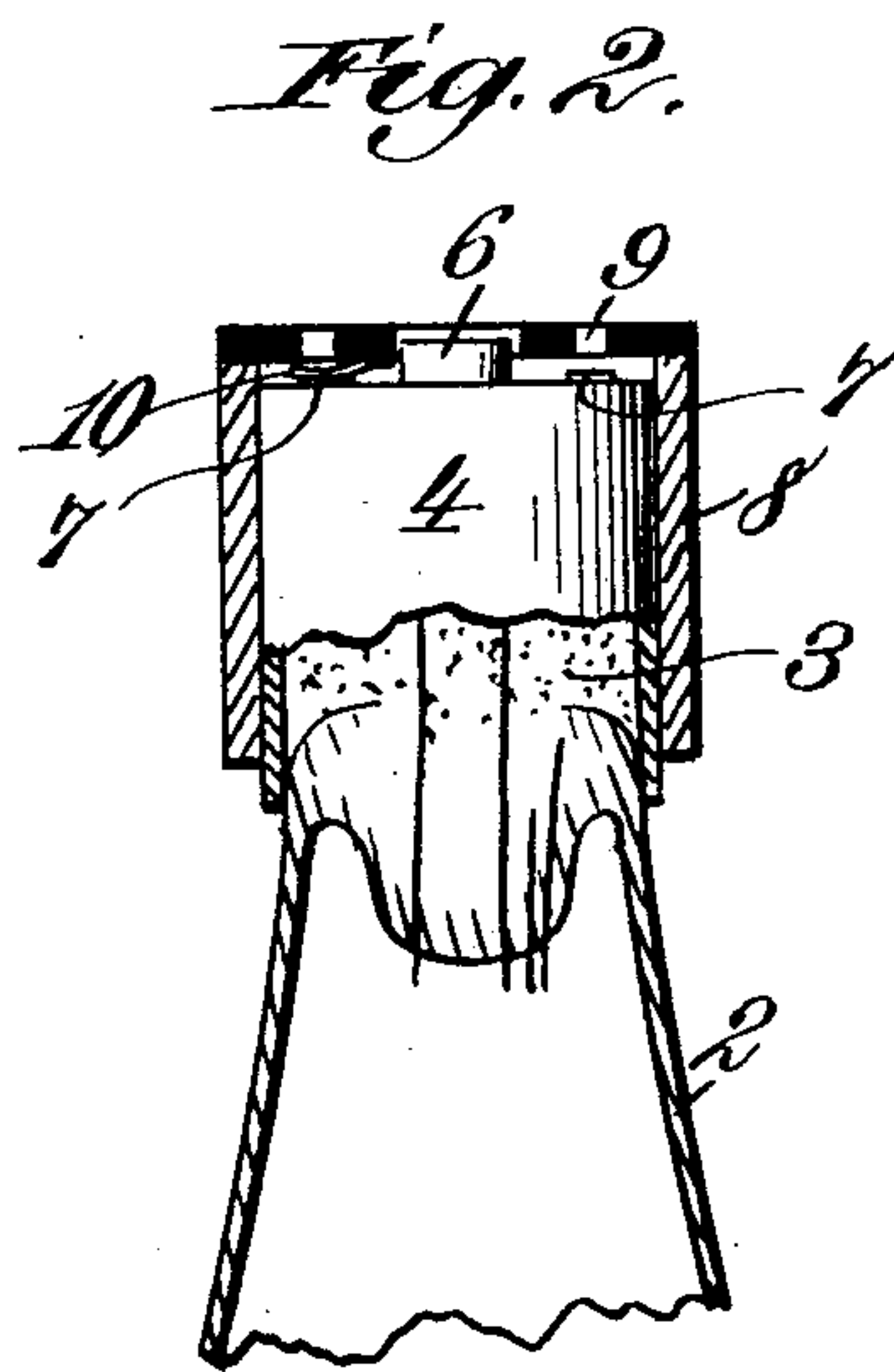
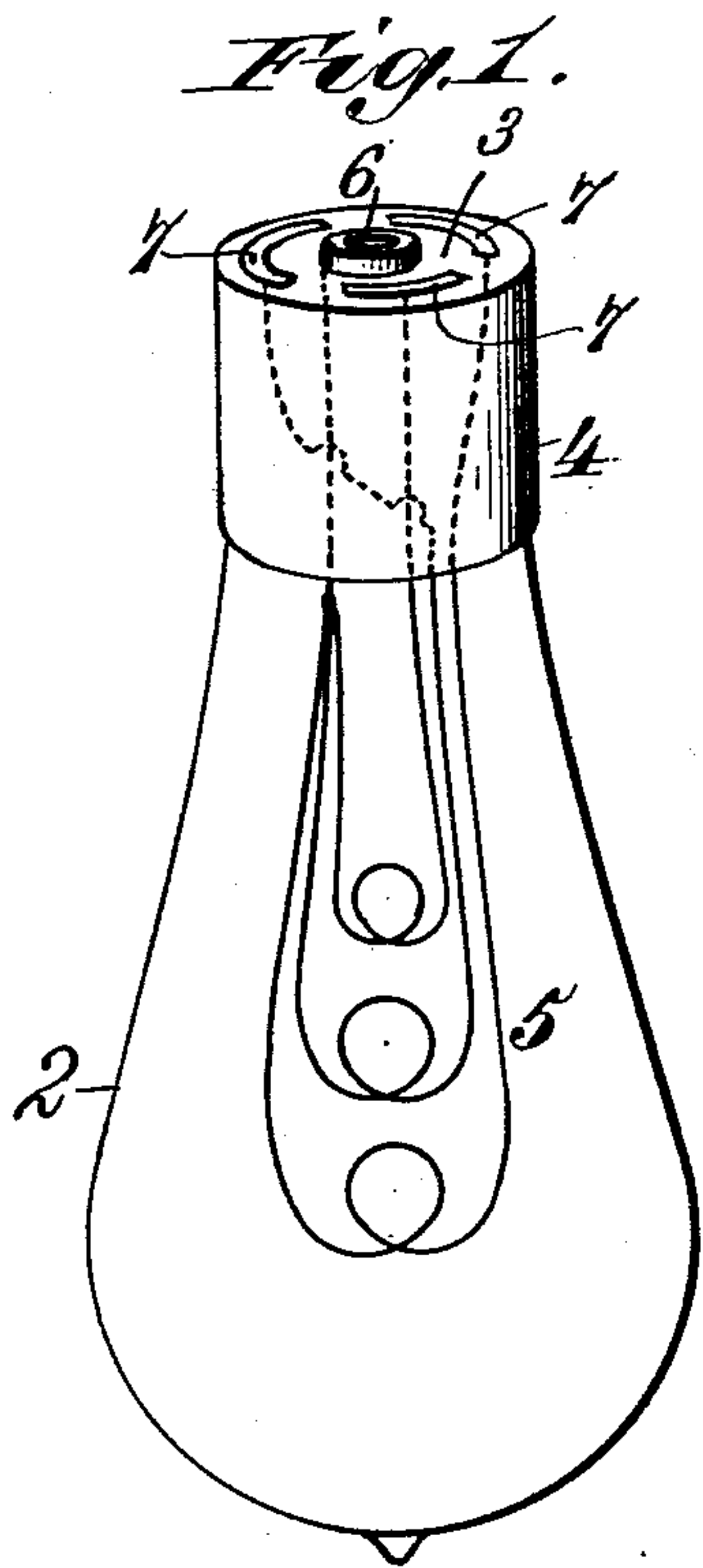


No. 750,720.

PATENTED JAN. 26, 1904.

W. A. SPRINGALL.
INCANDESCENT LAMP.
APPLICATION FILED JUNE 25, 1903.

NO MODEL.



Witnesses,
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UNITED STATES PATENT OFFICE.

WALTER A. SPRINGALL, OF SAN ANTONIO, TEXAS.

INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 750,720, dated January 26, 1904.

Application filed June 25, 1903. Serial No. 163,114. (No model.)

To all whom it may concern:

Be it known that I, WALTER A. SPRINGALL, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented new and useful Improvements in Incandescent Lamps, of which the following is a specification.

This invention relates to incandescent lamps of that kind provided with a plurality of filaments which may be alternately thrown into circuit to produce lights of different candle-power.

The object of the invention is to provide a simple device of this character with caps, either of which may be connected with the lamp to adapt the same either to the so-called "Thomson-Houston" socket or to the Edison socket.

In the adaptation of the lamp hereinafter set forth it includes a bulb or globe, a contact, a plurality of filaments in the globe, one end of each filament being connected to said contact, and a series of contacts insulated from each other and from the first-mentioned contact, to which the other ends of said filaments are connected, said series of contacts being in a substantially common plane at approximately right angles to the longitudinal axis of the bulb, by virtue of which when the lamp is turned in its cap or socket any one of the filaments may be put in circuit. In the present instance there are three filaments; but this number of course may be either increased or decreased.

In the drawings accompanying and forming a part of this specification, Figure 1 is a perspective view of a lamp including my invention. Figs. 2 and 3 are sectional elevations of the same connected, respectively, with the two caps. Figs. 4 and 5 are perspective views of said caps.

Like characters refer to like parts throughout the several figures.

The lamp involves the usual bulb or globe 2, closed at its upper end by a seal 3, which is made of some suitable non-conducting material—say plaster-of-paris—and is surrounded by the band or casing 4, usually made of metal. The bulb 2 incloses a plurality of filaments, each denoted by 5, and of different can-

dle-power, and one end of each filament is connected electrically with a nut 6, constituting a contact and embedded in the seal 3. The opposite ends of the filaments are connected with contacts, each denoted by 7, which are set into the seal 3. The contact or nut 6 is arranged substantially centrally of the seal and projects above the series of contacts 7, the latter being arranged concentrically of the said nut or contact 6. There are three of these contacts 7, corresponding in number, of course, with the filaments and arranged substantially in a common plane and at right angles, or substantially so, with the longitudinal axis of the bulb or globe 2.

In Figs. 2 and 4 I have shown a cap adapted especially for insertion in what is familiarly known as a "Thomson-Houston" socket, said cap being shown in Fig. 2 as connected with the lamp. This cap is denoted by 8 and is in the nature of a thimble, its top being composed of some non-conducting material, such as vulcanized rubber, while its body is usually made of metal. In the non-conducting top of the cap or thimble 8 is countersunk a ring 9, of some suitable conducting material and which upon the insertion of the cap in the Thomson-Houston socket is adapted to fit against a corresponding ring in said socket, which ring is, as is well-known, connected with one leading-in wire for the lamp. The other leading-in wire is connected with a screw in said socket. I have not deemed it necessary to show the socket, as it forms no part of the invention. A spring-arm 10 is inclosed by the cap or thimble 8, and its body is connected by screws or their equivalents with the contact-ring 9, the said spring-arm being of course insulated from the body of the cap and being adapted to cooperate with the separated contacts 7, hereinbefore described. The top of the cap is centrally perforated to receive the usual depending screw in the Thomson-Houston socket, which screw is adapted to engage the central nut or contact 6 upon the lamp.

When the cap or thimble 8 is fitted in the Thomson-Houston socket, the central screw therein, to which a leading-in wire is connected, will depend through the said central

perforation. In use the cap or thimble 8 will be inserted in the Thomson-Houston socket, the screw just mentioned projecting downward through the central perforation in the top of the thimble. The head or banded end of the lamp will be inserted in the thimble, so that the central nut can receive said depending screw. Upon the connection of these two parts the spring-arm 10, which it will be understood constitutes a contact fixed relatively to the contacts 7, will be contiguous to the upper face of the seal 3 in which said contacts 7 are set. Then by turning the lamp any one of the contacts 7 can be brought into engagement with the free end of the spring arm or contact 10. When said relatively fixed contact 10 engages any one of the series of contacts 7, the current will of course pass through the central screw in the socket into the nut or contact 6, into a filament 5, from the latter to the appropriate contact 7, then to spring-contact 10, to the ring 9 and corresponding ring in the socket which, as previously stated, I have not shown.

The filaments are of course of different candle-power, and by turning the lamp any one of the filaments may be brought into circuit. When the free end of the spring-arm 10 is between any two of the contacts 7, the light will be extinguished, or the same result can be secured from the usual switch in the socket.

In Figs. 3 and 5 I have shown a cap to be used in connection with the Edison socket, the latter being interiorly threaded. The modified form of cap is denoted by 11, and it has a head 12, separated from the substantially cylindrical body thereof by some suitable insulating material. The head 12 of the cap is adapted to be connected with the terminal in the socket to which one leading-in wire is connected, the other leading-in wire being connected directly to the socket. The terminal in question I have not shown. When, however, the cap 11 is inserted in the Edison socket, the head 12 thereof, which of course is of conducting material, engages said terminal, the exterior surface of the body of the cap of course engaging the interior surface of the said socket. The lamp is the same in each case, it being evident from this that the interior surface of both caps is smooth.

The spring-arm 13 is connected in some suitable way to the body of the cap 11 interiorly thereof. The top or head 12 of said cap has approximately centrally thereof the depending screw 14, the two parts usually being made integral. When the lamp is introduced into the cap 11, the screw will enter and engage into the central nut or contact 6 of the lamp, while the free end of the spring arm or contact 13 will bear against the upper surface of the lamp, (which of course is in the plane of

the corresponding portions of the series of contacts 7,) whereby on turning the lamp any one of the contacts 7 will be brought into engagement with the free end of the spring arm or contact 13 to throw the corresponding filaments in circuit.

The nut or central contact 6 upon the lamp of course projects above the series of contacts 7, so that when said nut or contact receives either one of the screws hereinbefore mentioned the contacts 7 will be in proper position for engagement by the spring-arm 10 or 13, as the case may be, and when said nut is engaged by either of the screws hereinbefore mentioned the lamp is held in assembled relation with respect to the socket.

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

1. The combination of a lamp and a cap rotatably connected thereto, the lamp having a bulb, a contact, a plurality of filaments in the bulb, one end of each filament being connected to said contact, the latter consisting of a nut, a series of contacts insulated from each other and from the first-mentioned contact to which the other ends of said filaments are connected, said series of contacts being in a substantially common plane at approximately right angles to the longitudinal axis of the bulb, and the cap having therein a contact to engage any one of said series of contacts upon the rotation of one of said first-mentioned parts with respect to the other and also having in its top a hole registering with said first-mentioned contact or nut.

2. The combination of a lamp and a cap rotatably connected thereto, the lamp having a bulb, a contact, a plurality of filaments in the bulb, one end of each filament being connected to said contact, a series of contacts insulated from each other and from the first-mentioned contact to which the other ends of said filaments are connected, said series of contacts being in a substantially common plane at approximately right angles to the longitudinal axis of the bulb, said first-mentioned contact consisting of a nut projecting above the top of the lamp, the cap inclosing the top of the lamp, having a hole registering with said first-mentioned contact, and a single spring-contact electrically connected with its top and adapted to engage any one of said series of contacts upon the turning of one of said first-mentioned parts with respect to the other.

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

WALTER A. SPRINGALL.

Witnesses:

J. R. DAVIS,
H. E. AIKEN.