No. 819,437. PATENTED MAY 1, 1906.

J. H. JONES.

MEANS FOR PACKING JOINTS.

APPLICATION FILED DEC. 5, 1904.

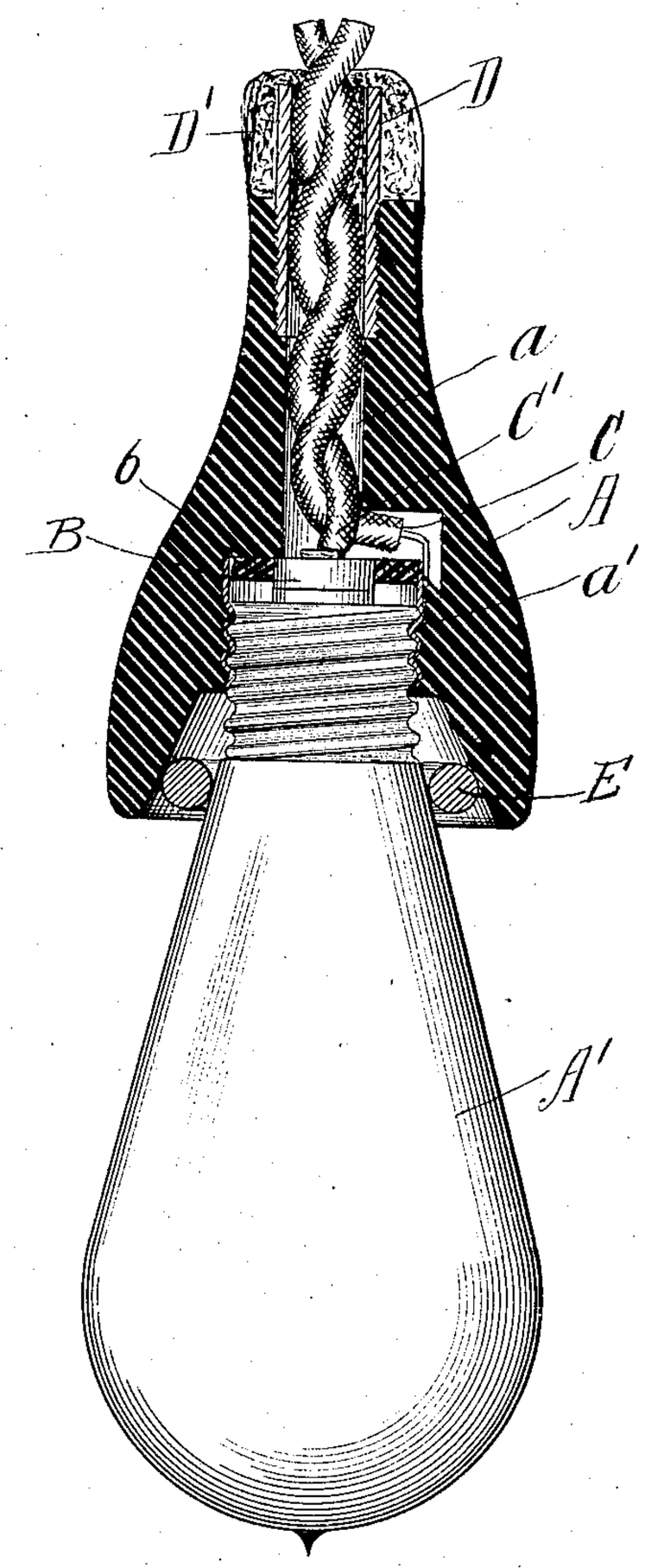

Fig. 1.

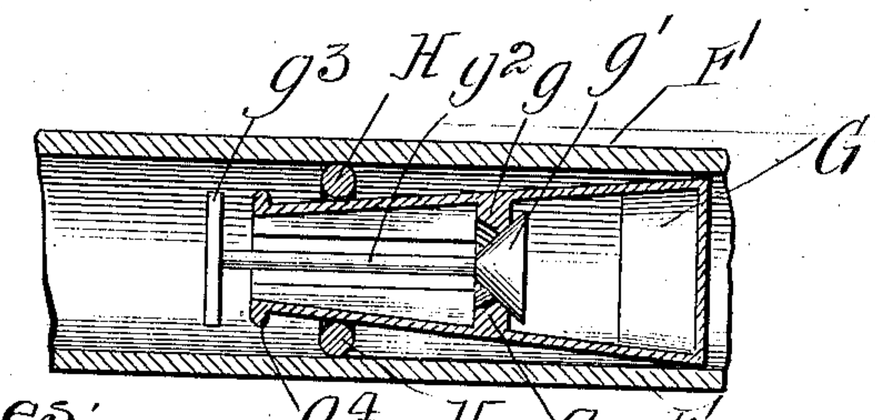

Fig. 2.

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UNITED STATES PATENT OFFICE.

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MEANS FOR PACKING JOINTS.

No. 819,437. Specification of Letters Patent. Patented May 1, 1906.

Application filed December 5, 1904. Serial No. 235,523.

To all whom it may concern:

Be it known that I, JAMES H. JONES, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Means for Packing Joints; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in packing for joints, and more particularly to a packing adapted to be carried upon one of two connected members, and when said members are moved relative to each other to be forced in and out therewith according to such relative movement, thereby forming a fluid-tight packing capable of adjusting itself to the position of said members.

The object of this invention is to provide a cheap and durable packing adapted to be wedged between two interfitting members and when said members are forced together or are adjusted longitudinally of each other to adjust itself to such movement and tightly close the joint.

The invention consists in the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a view, partly in section and partly in side elevation, of an incandescent lamp provided with packing means embodying my invention. Fig. 2 is a longitudinal section of a pipe and check-valve, illustrating a further use to which my invention is adaptable.

As shown in said drawings, referring first to Fig. 1, in which an incandescent lamp is provided with fluid-tight joint to enable it to be used in fluids without danger of short-circuiting, A represents a light-plug, of any preferred form and material, provided with a central bore *a*, which at the end adapted to receive the bulb A′ opens into an enlarged bore, provided with a threaded sleeve *a′*, in which said bulb is screwed in the usual manner. The inner end of said sleeve *a′* is insulated from the lamp-contact B by means of any desired insulating material *b*, such as porcelain, and the lead-wires C and C′ are engaged thereto and to said contact in the usual manner and extend outwardly through the bore in said plug A. In the end of said bore *a* opposite from the bulb A′ is the tube or sleeve D, which, as shown, has threaded engagement in said plug and projects outwardly a short distance therefrom, and molded thereon about said leads is a filling of porcelain or other material D′, impervious to water or other fluids, which prevents the fluid from entering the plug at that end and coming in contact with the connections. The end of the plug adapted to receive the bulb A′ is cored to provide a conical or bell-shaped recess about the small end of said bulb, the slant of which is at a greater angle to the longitudinal axis of the plug than is the slant of the bulb and which forms a seat for the packing-ring E, carried upon the bulb below the threaded end thereof. Said ring may be of any preferred material, but preferably is constructed of a material having considerable flexibility, such as rubber, leather, or the like, so that as the bulb is screwed into its socket it will jamb the ring into engagement with the walls of said recess, causing it to roll slightly between the bulb and said walls, thereby adjusting itself to the movement. If said ring is constructed of a non-flexible material, such as hard rubber or gutta-percha, it is carried inwardly with the bulb and tightly jammed against the walls of the plug and forms a fluid-tight joint.

A further use to which my improved packing is adapted is shown in the construction illustrated in Fig. 2, wherein F represents a pipe of metal or any preferred material, provided with a check-valve G, of the usual or any desired construction, which, as shown, comprises a tapered shell provided centrally with a transverse valve-seat *g*, adapted to receive the conical valve-closure *g′*, the stem g^2 of which extends outwardly through the smaller end of said shell and is provided with a cross-bar or stop g^3, adapted to limit the movement of said closure away from its seat. At the smaller end of the shell is provided an outwardly-directed peripheral flange g^4, above which, between the shell and the pipe, is the packing-ring H, similar to that before described, which is normally held in place by the wedging action of the shell therein caused by the pressure of the fluid above the same when the valve is closed and also by the weight of said shell. Should it, however, from any cause drop downward, it is prevented from escaping by means of said flange g^4 at the lower end of the shell.

The operation is as follows: In the construction shown in Fig. 1 the packing-ring E

is placed over the small end of the bulb A′, and when said bulb is screwed into the socket *a′* of the light-plug A it is wedged tightly between the bulb and the walls of the conical recess in the end of said plug, and if made of flexible material it will tend to roll inwardly therein and form a tight and self-adjusting packing, which will prevent the ingress of moisture to the light-contacts. If of non-flexible material, it will be jammed tightly between the outer wall and the bulb and completely close the opening. In the construction shown in Fig. 2 the check-valve G being tapered will tend, by its own weight and by the weight of the fluid above the same when closed, to force itself downwardly into the packing-ring H and wedge said ring firmly against the walls of the pipe, as before described, thereby preventing the passage of any fluid between the shell and the pipe.

While I have shown only two uses to which my packing may be adapted, it is obvious that it may be used for many other purposes, and many details of construction may be varied without departing from the principles of my invention.

I claim as my invention—

1. The combination with a lamp-socket having a conical recess in one end thereof, of a threaded sleeve extending inwardly from said recess, a lamp-bulb engaged in said sleeve and affording between the same and the walls of said recess an annular conical chamber of greater width at its outer than at its inner end and a packing-ring, cylindric in cross-section, fitted closely between the bulb and the walls of said recess and adapted when the bulb is moved inwardly to wedge in said chamber with a rolling movement.

2. The combination with a light-plug having a longitudinal bore therethrough of a light-bulb engaged in said bore, a conical-shaped chamber in the outer end of said plug partially inclosing the bulb and having its walls slanting upwardly and inwardly at a slightly-greater angle than the walls of the bulb and forming therewith an annular wedge-shaped recess, a resilient ring, cylindric in cross-section carried on said bulb and adapted when the latter is secured in place to roll between the bulb and plug with a wedging action.

3. In a device of the class described the combination with a lamp-bulb having a threaded connection thereon, of a light-plug having a threaded socket therein adapted to receive said connection, a part on said plug extending outwardly over the bulb and affording a conical chamber about the same and an annular resilient packing member engaged between the bulb and said part and adapted to wedge therebetween with a rolling action.

4. The combination with a light-plug having a conical recess in the end thereof of a light-bulb having threaded engagement with said plug and out of contact with the walls of the recess and partly inclosed thereby and an annular cylindric packing-ring supported solely by frictional engagement with the walls of said recess and bulb and adapted to roll therebetween when the bulb is inserted.

5. The combination with a light-bulb of a light-plug provided with a conical recess therein having its walls slightly divergent from the walls of the bulb and extending outwardly over the same and a cylindric packing-ring fitting closely between said walls and bulb and adapted when the bulb is being secured in the plug to be wedged into the plug with a rolling action.

In testimony whereof I have hereunto affixed my name in the presence of two subscribing witnesses.

JAMES H. JONES.

Witnesses:
C. W. HILLS,
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