

No. 838,613.

PATENTED DEC. 18, 1906.

F. J. FORBES & R. E. YORK.

LAMP SOCKET ADAPTER.

APPLICATION FILED JUNE 19, 1905.

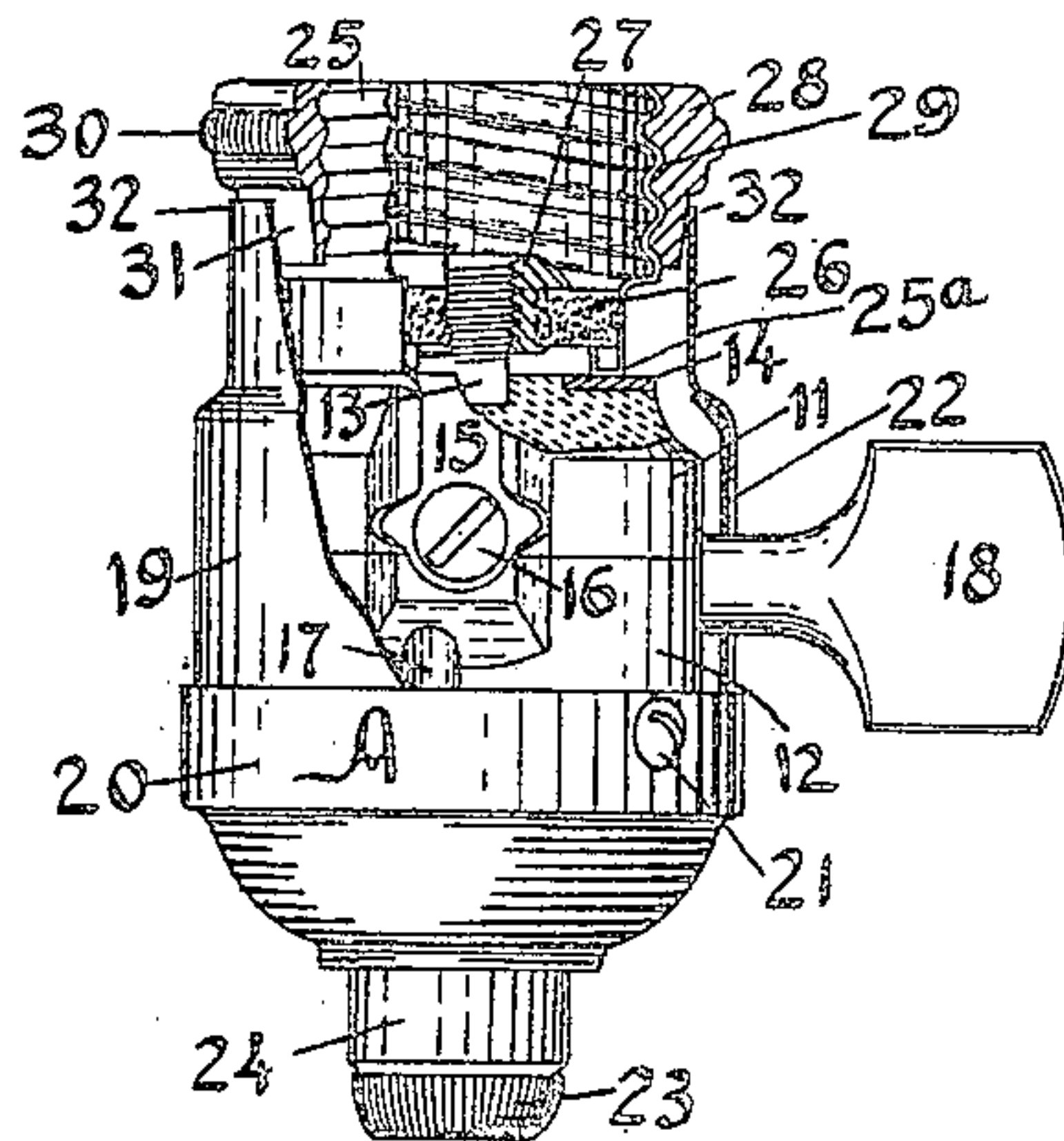


Fig. 1

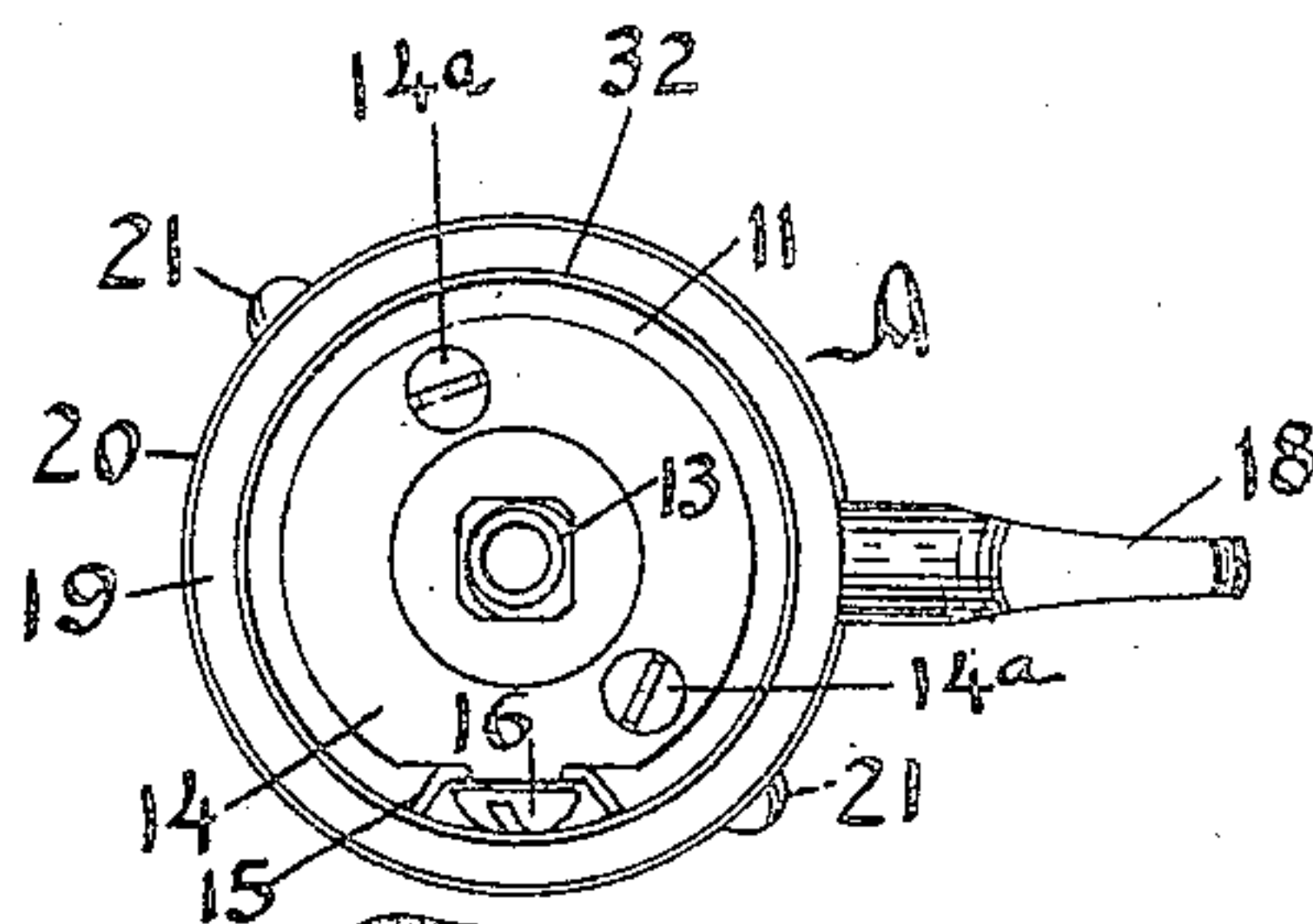


Fig. 2

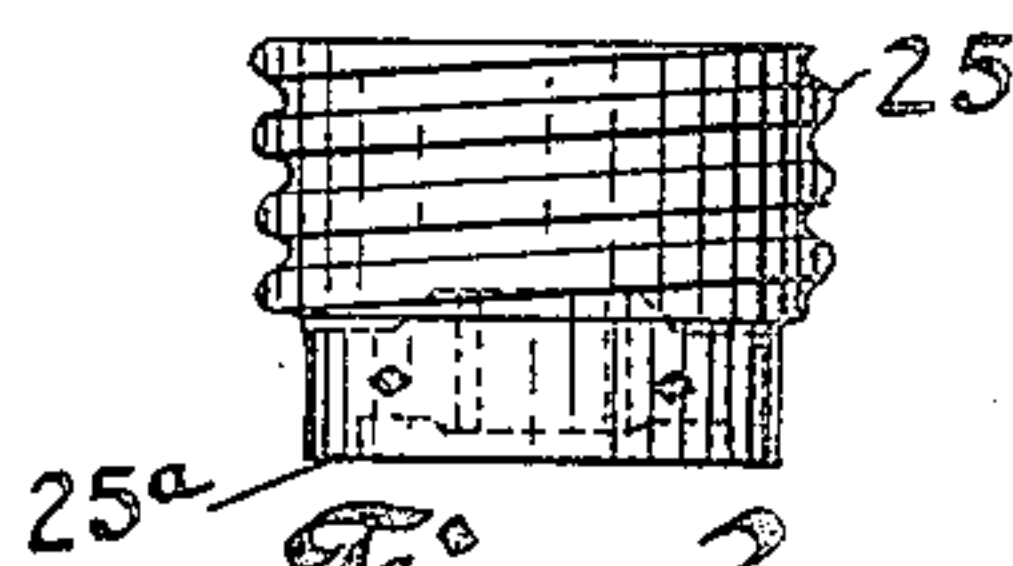


Fig. 3

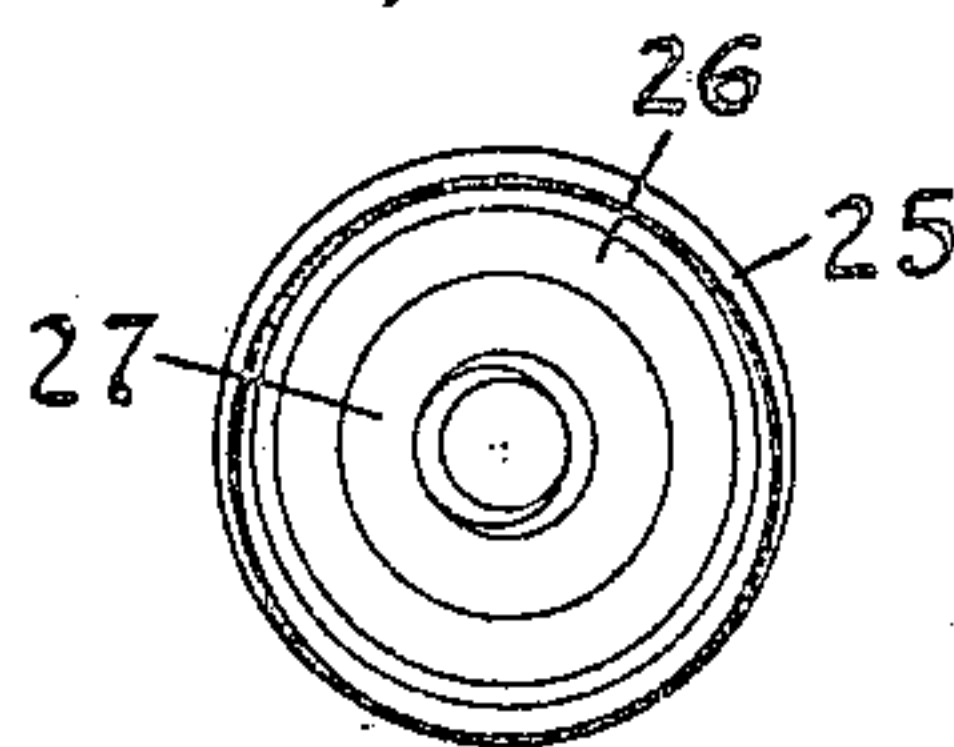


Fig. 4

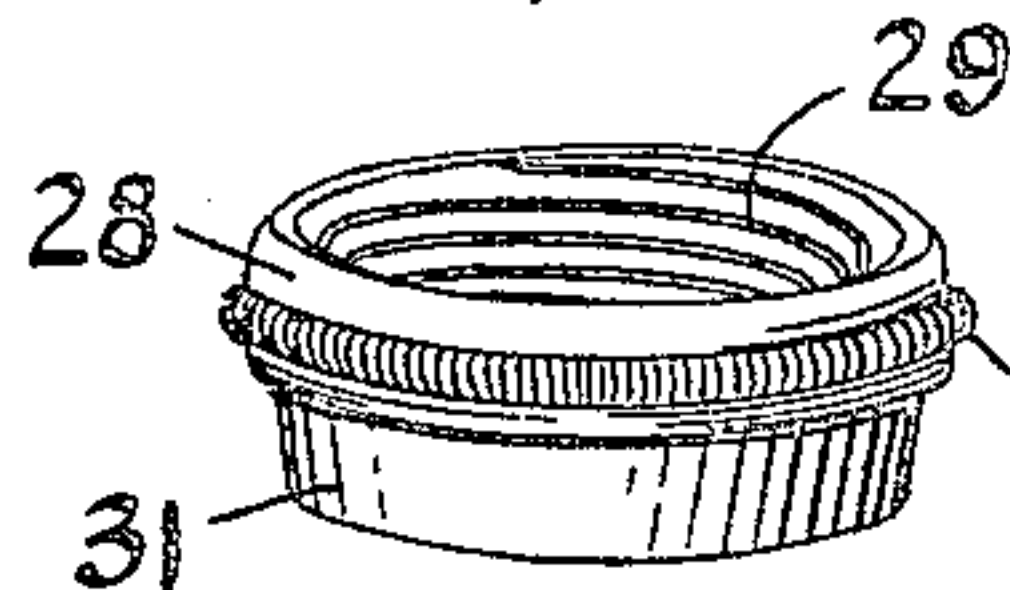


Fig. 5

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# UNITED STATES PATENT OFFICE.

FREDERICK J. FORBES AND ROBERT E. YORK, OF PORTAGE, WISCONSIN.

## LAMP-SOCKET ADAPTER.

No. 838,613.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed June 19, 1905. Serial No. 265,937.

*To all whom it may concern:*

Be it known that we, FREDERICK J. FORBES and ROBERT E. YORK, of Portage, Wisconsin, have invented a Lamp-Socket Adapter, of which the following is a specification.

This invention relates to devices for enabling incandescent electric lamps having one type of base to be used with sockets of a different type, such devices being technically known as "adapters," these adapters being used for ceiling-rosettes, branch blocks, cut-outs, lamp-receptacles, switches, and the like and consisting of a receiving-socket having two concentric terminals, with both of which the lamp-base makes connection when screwed thereinto.

Our improvements relate more particularly to Edison-Thomson-Houston adapters—that is to say, those which are used to adapt Thomson-Houston sockets for use with Edison lamps. As is well known, a Thomson-Houston socket has a central screw-post forming one terminal which engages with a screw-socket in the center of the lamp-base, whereas in the Edison socket the external terminal is provided with a thread which engages with a thread around the margin of the lamp-base. The adapter, therefore, in this case consists of a receptacle having a screw-socket in the center adapted to screw over the post of the lamp-socket and a marginal thread adapted to receive the base of the lamp. In using these adapters the adapter itself is screwed into the socket and the lamp screwed into the adapter. The adapter is intended to remain in the socket as a more or less permanent part thereof to receive new lamps from time to time; but it frequently happens when the lamp is unscrewed that the adapter unscrews with it and being overlooked by the user is sent away with the old lamp, and when a new lamp is brought forward it is then found that the adapter is missing, which causes considerable inconvenience.

The object of our invention is to avoid the difficulty and annoyance occasioned by the adapter sticking to the lamps by providing means whereby the adapter is held firmly in the socket when screwed thereinto and absolutely prevented from coming out unless removed purposely, while at the same time the adapter may be removed at any time by the proper manipulation.

Our invention is illustrated in detail in the accompanying drawings, wherein—

Figure 1 is a side elevation of a lamp-socket and adapter embodying our improvements, parts being broken away. Fig. 2 is a plan view of the socket by itself. Figs. 3 and 4 are respectively a side elevation and a plan view of the adapter proper, and Fig. 5 is a perspective of the jam-nut ring constituting the essential feature of our invention.

Referring, first, to Figs. 1 and 2, the character A designates an ordinary Thomson-Houston key-socket consisting of porcelain blocks 11 12, in the uppermost of which is fixed a central screw-post 13, connecting with one terminal of the lamp; a marginal ring 14, secured to the block 11 by screws 14<sup>a</sup> and having a depending tab 15, which connects, by means of a binding-screw 16, to the other terminal, there being a groove 17 in the lower porcelain block 12, through which the circuit-lead is introduced; a switch-key having a handle 18 and internal mechanism which is inclosed by the blocks 11 and 12 and not here shown; sheet-metal covers 19 and 20, the former of which is secured to the latter by screws 21; an internal insulating-sheathing 22, and a rubber collar 23, lining the tubular portion 24, through which the circuit-leads are introduced. There is nothing novel about this lamp-socket, as it is one in common use selected for purposes of reference and illustration, and any other device having a Thomson-Houston socket might be substituted therefor.

The adapter proper comprises a sheet-metal thimble 25, having its cylindrical upper part pressed into Edison threads, as shown, to fit the lamp-base and its lower margin turned inwardly to form an annular contact-surface 25<sup>a</sup>, adapted to make electrical contact with the ring 14, and in the lower part of the thimble 25 is fixed an insulating-disk 26, having mounted in the center thereof a socket-piece 27, which is internally threaded to receive the screw-post 13. There is likewise nothing novel in principle about this adapter of itself.

The element which in combination with the adapter constitutes more particularly our invention consists of a jam-nut ring 28, which is internally threaded, as shown at 29, Fig. 5, to screw over the exterior of the adapter 25, and externally is provided with a milled or roughened periphery 30 and below



this with a slightly-tapered lower margin 31, adapted to fit within the upper margin 32 of the cover 19 of the socket and jam there-against when screwed over the adapter.

- 5 The operation of our invention is as follows: The adapter 25 is first screwed into the socket, and the jam-nut ring 28 is then screwed down thereover until the surface 31 jams against the margin 32 of the socket.
- 10 This fixes the adapter in place. It will now be found impossible to release the adapter from the socket without first removing the ring 28, for the pitch of the inner thread on the post 13 is finer than the pitch of the outer
- 15 or Edison thread of the adapter, so that supposing the adapter to turn in the socket the action will be to draw the ring 28 down farther into the socket, as said ring by reason of the friction on its outer surface 31 cannot
- 20 itself turn, and the result is that the adapter immediately ceases to turn. Consequently a lamp introduced into the socket cannot now cause the adapter to become unscrewed, the latter being held in place as rigidly as if
- 25 it were a part of the socket.

The jam-ring 28 may be made of any suitable material, either metal or non-metal. For appearance sake we prefer to make it of hard rubber, and it will then act also as an

30 insulator to prevent the outer shield or cover of the socket from being in electrical connection with either pole of the circuit; but the ring 28 is not to be confused with other rubber rings in similar locations—as, for instance, that shown by the patent of Vetter,

35 No. 490,605, January 24, 1893, the purpose and effect of which are merely to hold the external shield of a socket in place and which has no relation to our invention.

40 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination with an adapter, a jam-nut for holding said adapter in a lamp-

45 socket.

2. In combination with an adapter for lamps having bases of that type which has a central terminal piece and a cylindrical screw-threaded piece forming the respective

50 terminals thereof, said adapter having a cor-

respondingly-threaded cylindrical receptacle; a jam-nut engaging with the threads of said receptacle.

3. In combination with a lamp-adapter comprising a sheet-metal receptacle with 55 threads pressed therein, a jam-nut engaging with said threads on the exterior of said receptacle.

4. In combination with an adapter comprising a sheet-metal receptacle having 60 threads pressed therein, a jam-nut ring having internal threads adapted to engage the external surface of said receptacle and having a tapered external margin adapted to jam within the margin of a lamp-socket 65 whereby the adapter is held rigidly in the socket.

5. In combination with a lamp-adapter adapted to receive lamp-bases of the type having a central terminal post and a cylindrical threaded member surrounding it 70 forming the other terminal, said adapter being adapted to engage in sockets having one terminal consisting of a central screw-post, and the other terminal consisting of a metallic ring surrounding said post; a jam-nut adapted to prevent said adapter from being 75 unscrewed from the socket.

6. In combination with an adapter having a central socket to receive the screw-post and 80 a sheet-metal surface pressed into threads to receive a lamp, a jam-nut ring engaging with the exterior of said threaded surface, and engaging frictionally with the margin of the socket in which the adapter is placed. 85

7. In combination with an adapter having a central socket to receive the screw-post and a sheet-metal surface pressed into threads to receive a lamp, a jam-nut ring engaging with the exterior of said threaded surface and 90 having a tapered external margin adapted to fit into the margin of the lamp-socket and jam thereagainst.

In testimony whereof we have hereunto set our hands this 16th day of June, 1905.

FREDERICK J. FORBES.  
ROBERT E. YORK.

In presence of—

A. F. KELLOGG,  
JOHN P. RAWSON.