

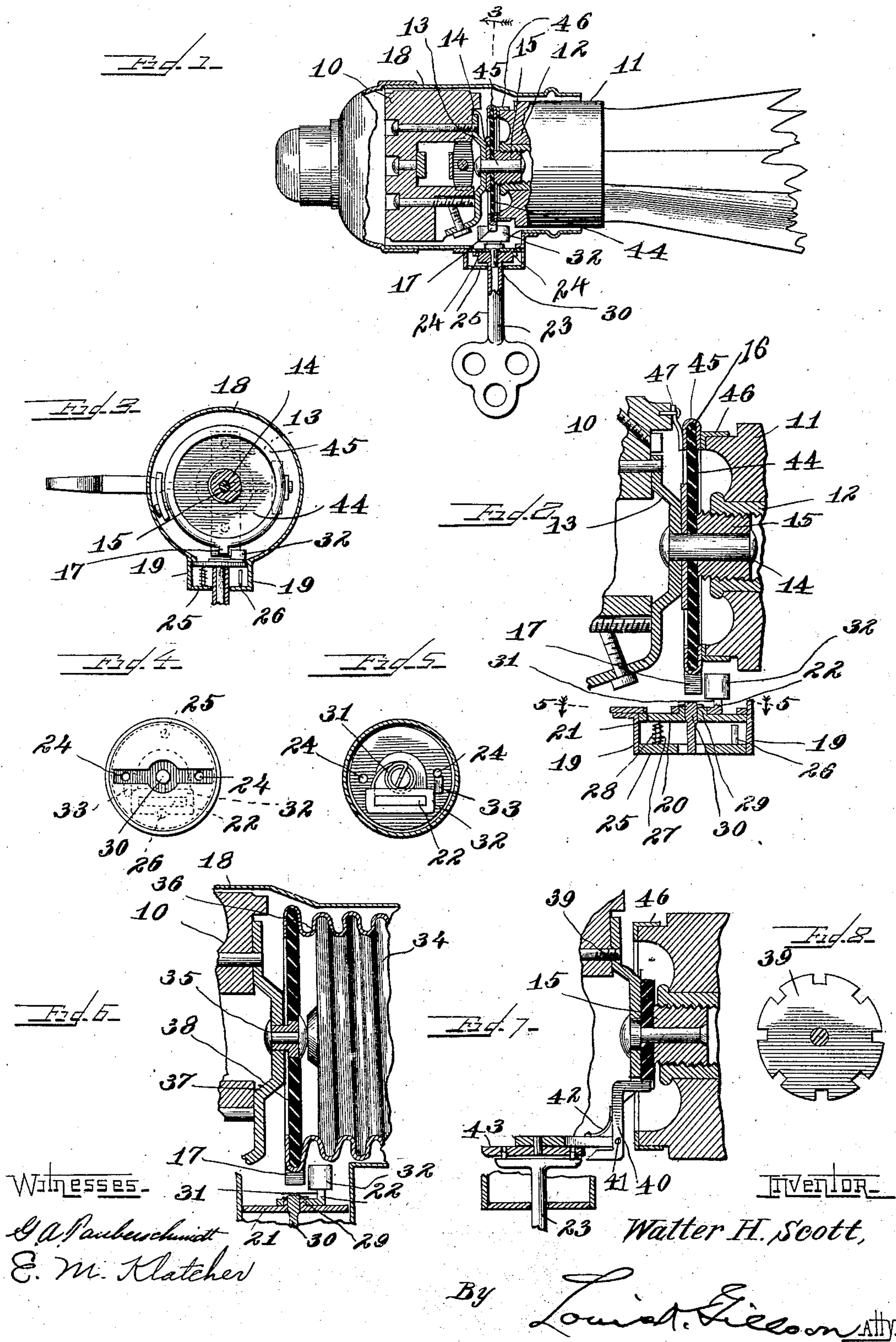
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INCANDESCENT LAMP HOLDER.

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NO MODEL.



UNITED STATES PATENT OFFICE.

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INCANDESCENT-LAMP HOLDER.

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To all whom it may concern:

Be it known that I, WALTER H. SCOTT, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Incandescent-Lamp Holders, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

10 The invention pertains to the mechanism for securing incandescent lamps in their sockets, its object being to provide against the unauthorized detachment of a lamp, so as to prevent theft.

15 The invention consists in a form of lock which normally permits the free rotation of a lamp within its socket, the attaching member of the socket turning with the lamp and a detent being provided which may be thrown
20 by means of a key into engagement with such attaching member, so as to lock it against rotation, thereby permitting the lamp to be unscrewed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a detail central longitudinal section through the socket-head and the lamp-head. Fig. 2 is a detail section on the same plane as Fig. 1 drawn to a larger scale and with some of the parts differently positioned.
30 Fig. 3 is a detail section on the line 3 3 of Fig. 1. Fig. 4 is an elevation of a detail of a portion shown in section in Fig. 2. Fig. 5 is a detail section on the line 5 5 of Fig. 2.
35 Fig. 6 is a longitudinal detail section showing the invention applied to a lamp head and socket differing in form from that shown in Figs. 1 and 2. Fig. 7 is a detail longitudinal section showing a modified form of locking
40 mechanism, and Fig. 8 is a detail of one of the parts shown in Fig. 7.

The invention is applicable to that form of lamp and socket now most commonly used in which the lamp is engaged with the socket by
45 means of screw-threads. In some lamps of this class the head of the lamp is centrally socketed and engages a centrally-threaded stud of the socket-head. In other types the thread is located on the perimeter of the
50 lamp-head and engages an internal thread in

the socket-head. The invention is illustrated as applied to both types of lamps, the former being illustrated in Figs. 1, 2, and 7 and the latter in Fig. 6. No attempt has been made in the drawings to fully show the electrical
55 connections, as these may be of any desired form and do not bear upon the present invention.

At 10 there is shown a socket-head adapted to receive and hold a lamp (shown at 11) the head of which is provided with a central threaded socket-block 12. A plate 13 is secured to the end of the head 10, and through this plate there projects loosely a headed pin 14, to the outer end of which is fixed a threaded stud-block 15, complementary to the socket
60 in the head of the lamp, and also a disk 16, located at the inner end of the block 15 and having at its rim a radially-projecting lug 17. The casing 18 of the head 10 projects forwardly beyond the head to form a socket for
65 receiving the head 11 of the lamp, so that the disk 16 is inclosed thereby. Inasmuch as the pin 14 is free to turn in the plate 13, it is obvious that the lamp cannot be screwed upon
70 or removed from the stud-block 15 unless the latter is held against rotation.

An annular casing 19 projects laterally from the casing 18, and within it is located a rotatable disk 20, seated against a shoulder 21,
80 formed by continuing the wall of the casing 18 past the wall of the casing 19. To the inner face of this disk is secured eccentrically a detent 22, which by the rotation of the disk 20 may be carried into the path of the lug 17,
85 thereby preventing the rotation of the disk 16 and with it of the stud-block 15, so that the lamp may be turned relatively to the latter for the purpose of engagement and disengagement. The disk 20 is controlled by means of
90 a key 23 of any desired construction. As shown, this key is provided with longitudinally-projecting wards 24, adapted to engage suitable apertures in the disk 20, the outer end of the casing 19 being closed by means of
95 a plate 25, having an aperture corresponding in shape with the key. These keys will of course be indefinitely varied in form, and such variation implies corresponding variation in the form of aperture or keyhole, as
100

well as of the engaging apertures of the disk 20. Stud 26 27 are shown as projecting inwardly from the plate 25 and bearing frictionally against the disk 20. One of these plates, as 26, may serve as a stop to limit the travel of the key, and one or both of them may carry a spring, as 28, which bearing upon the disk 20 holds it against its seat and prevents its accidental rotation.

Inasmuch as the detent 22 may sometimes encounter the lug 17 when turned by means of the key 23, it is preferable to mount it yieldingly upon the disk 20. To this end I provide the detent with a hub 29, mounted rotatably upon a stud 30, set centrally in the disk 20, and to this disk I attach one end of a coiled spring 31, the other end of which is secured to the detent 22. This spring is of sufficient tension to overcome the friction of the screw-threads of the lamp-head and stud-block 15, but will yield to pressure liable to break any of the parts.

The detent 22 is covered with an insulating material, such as rubber, as shown at 32. A stud 33, projecting from the face of the disk 20 into the path of the detent 22, stops it in its backward travel when the lateral wards of the key are in register with the keyhole in the plate 25.

When the screw-threads of the lamp-head are upon its perimeter, as shown at 34 in Fig. 6, a stud 35 attaches the threaded socket 36 to the head 10 and is free to rotate in the end plate 37 of this head. In other respects the construction is substantially the same as that already shown, a lug 17 projecting laterally from the plate 38 and a detent 22 being provided which may be turned into its path, so as to hold the socket 36 against rotation.

It is obvious that the locking device may be varied greatly in form without departing from the scope of the invention—as, for example, in the modification shown in Figs. 7 and 8, in which in lieu of the plate 16, mounted with the stud-block 15, there is shown a plate 39, having its perimeter notched for the engagement of a lever 40, pivoted, as shown at 41, to the socket-head 10, so that one of its ends may be thrown into one of the notches of the plate 39, a spring 42 being provided for holding the lever normally in engagement with this plate. In this construction the key 23 controls a cam disk or arm 43, which may be thrown against one end of the lever 40, so as to swing it on its pivot in opposition to the spring 42. When it is desired to attach or detach a lamp, the cam is thrown out of engagement with the lever, and the latter is by the action of the spring brought into engagement with the notched plate. The key leaves the cam behind the lever when withdrawn from the keyhole.

The body portion of the plate 16 (indicated in Fig. 2 by the numeral 44) is of insulating material, such as indurated fiber, and it carries

at its rim a metallic band 45, adapted to engage a metallic band 46 on the lamp-head, and a brush 47, carried by the socket-head and in connection with one of the branches of the electric circuit, thereby serving as means for transmitting current to the lamp, the other branch of the circuit being in electrical connection through the plate 13 with the pivot-pin 14 and block 15. In the various forms of construction means are provided for thus carrying both branches of the circuit into the lamp.

In all of the forms shown the threaded member of the socket-head is normally free to turn, so that it will neither receive nor release the threaded member of the lamp-head, and means are provided for preventing the rotation of this member of the socket-head, so that the lamp may be engaged with and disengaged from it. By this means the unauthorized removal of the lamp is prevented.

I claim as my invention—

1. In combination, a socket-head, a threaded lamp-engaging member normally freely rotatable on the head, and means for securing such member against rotation.

2. In combination, a socket-head, a threaded lamp-engaging member normally freely rotatable on the head, and a detent movable into and out of engagement with the rotatable member.

3. In combination, a socket-head, a threaded lamp-engaging member normally freely rotatable on the head, and a key-controlled detent movable into and out of engagement with the rotatable member.

4. In combination, a socket-head having a shell, a threaded lamp-engaging member within the shell and being pivotally attached to the head, and means for securing such member against rotation.

5. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the plate, a detent for preventing the rotation of the stud-block and being normally out of engagement therewith, and means for bringing the detent into engagement with the stud-block.

6. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the plate and having a radial lug, an oscillating detent movable into the path of the lug, and means for oscillating the detent.

7. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the plate and having a radial lug, an oscillating detent normally out of but movable into the path of the lug, and means for oscillating the detent.

8. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the

plate and having a radial lug, an oscillating plate, a detent secured to the plate and movable into the path of the lug, and means for oscillating the plate.

5 9. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the plate and having a radial lug, an oscillating plate, a detent yieldably secured to the plate and movable into the path of the lug, and means
10 for oscillating the plate.

10. In combination, a socket-head, a plate fixed to the head, a threaded lamp-engaging stud-block in swiveled engagement with the
15 plate and having a radial lug, an oscillating plate, a detent secured to the plate and mov-

able into the path of the lug, a casing inclosing the plate and having a key-opening, a key for engaging the plate fitted to the aperture, such aperture being so disposed that the detent is out of the path of the lug when the plate is engageable by the key.

11. In combination, a socket-head, a plate of insulating material in swiveled engagement with the head and having a metallic rim, a rotatable and threaded lamp-engaging member mounted fixedly with the plate, and means for securing the plate against rotation.

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Witnesses:

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