July 1, 1930. W. TURSE 1,769,004

ADJUSTABLE LAMP

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FIG. 1.

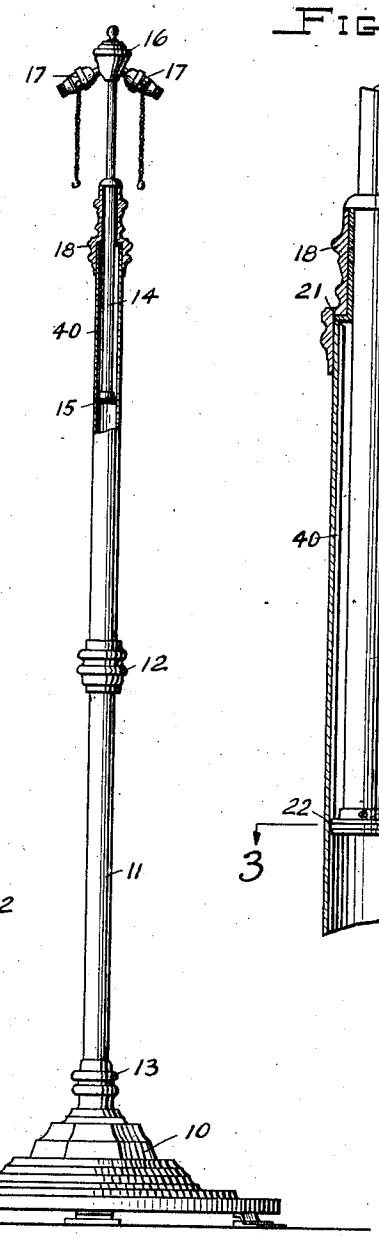


FIG. 2.

FIG. 4.

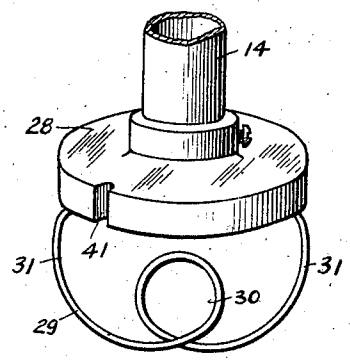
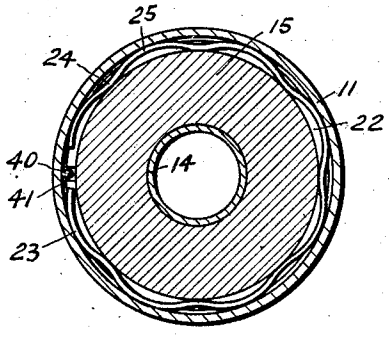


FIG. 3.



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FIG. 5.

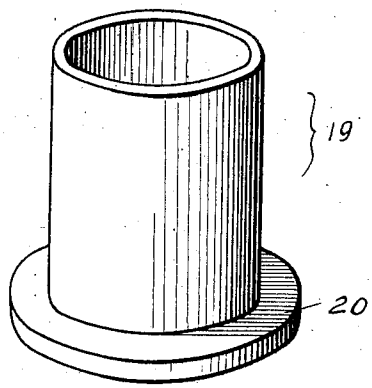


FIG. 6.

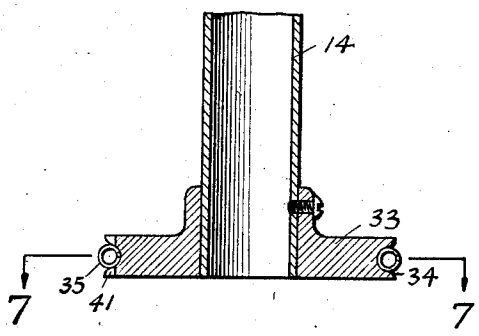


FIG. 7.

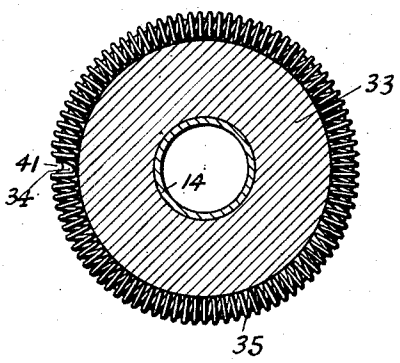
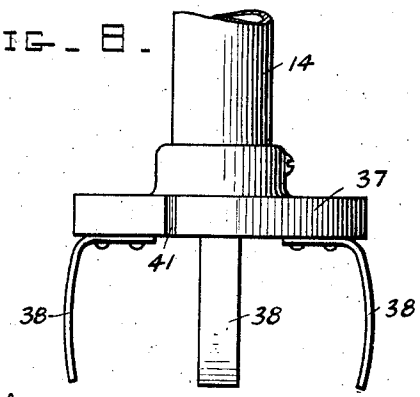


FIG. 8.



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UNITED STATES PATENT OFFICE

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ADJUSTABLE LAMP

Application filed December 22, 1927. Serial No. 241,753.

My invention relates to electric lamps and has for an object the provision of a lamp which may be adjustable as to height without impairing its appearance or destroying its symmetry of outline, which is safely supported in adjusted positions without the aid of auxiliary fastening means requiring adjustment or other attention and without visible means for such support.

Another object of the invention is to provide a lamp support of this character in which an extensible member is slidably held in relation to the standard, with which it telescopes, in such a manner that no looseness or side play will be present and will remain in any position to which the extensible member is adjusted without any manually operated accessory or attachment.

Still another object is to so design the several parts comprising the lamp that it may be constructed of highly polished or lacquered tubing without disfiguring the finish of the tubing or subjecting same to disfigurement, due to the extending and retracting of the extensible member.

The above objects are accomplished by the provision of a support for lamp sockets and the like having one member telescopically received in another and resilient yielding means on the first of said members frictionally contacting the walls of the second named member. Associated with this construction may be provided a sleeve on the second named member snugly fitting the first named member and assisting the contact member in supporting the first named member in positions of adjustment and against lateral departure from coaxial alignment of the telescopic member. A further accessory may be provided to prevent the turning of one member relative to the other in the nature of a longitudinally extending feather and a notch or groove with which the same cooperates.

The following figures of the drawings show several forms of the device illustrative of the principles of the invention.

In the drawings:

Figure 1 is a side view of the lamp embodying my invention, certain parts being broken away,

Figure 2 a view, partly in section, of a fragment of the lamp shown in Figure 1 drawn to a larger scale in order to illustrate certain details of construction, and

Figure 3 a sectional plan view, taken on line 3—3 on Figure 2.

Figure 4 is an enlarged perspective view of a piston having a different form of spring support, and

Figure 5 an enlarged perspective view of the protecting bushing shown in Figure 1.

Figure 6 is a central vertical sectional view showing a piston similar to the piston shown in Figure 1 but having a different type of spring support,

Figure 7 a sectional plan view thereof, as indicated by line 7—7 on Figure 6, and

Figure 8 a side view of a piston showing still another form of spring support.

Referring now in detail to the drawings, my invention has been shown embodied in a floor lamp whose standard comprises a base 10, of sufficient weight and diameter to insure the stability of the lamp, and a tubular upright 11 secured to base 10 in any suitable manner and, if desired, provided with ornaments 12 and 13.

A tubular extension 14 telescopes with upright 11 and has fixed on its lower end a piston 15 which is slightly smaller in diameter than the interior of upright 11. A fixture 16, having one or more electric lamp sockets 17, is secured on the upper end of extension 14 and is adapted to support a shade (not shown); lamp sockets 17 being connected to a source of electric energy by means of extensible flexible conductors (not shown) extending through the interiors of extension 14 and upright 11.

Extension 14 may be of any diameter smaller than the interior of upright 11 but is preferably considerably smaller in order to give the lamp an artistic appearance and, consequently, it is necessary to retain extension 14 centrally of upright 11. This is accomplished by piston 15 and by reducing sleeve 18, preferably in the form of an ornament, which fits snugly over the top of upright 11, as shown in Figures 1 and 2.

As the friction created by moving exten-

sion 14 through sleeve 18 would tend to mar the surface of the extension, a protective bushing 19 of fibre or similar material is snugly fitted into the upper part of sleeve 18 and its inside diameter is such that extension 14 has a sliding fit therein. Bushing 19 is held against movement longitudinally of sleeve 18 by means of an integral flange 20, of nearly the same diameter as upright 11, clamped between the end of the upright and a shoulder 21 formed in sleeve 18.

Extension 14 is held in adjusted positions by a spring support carried by piston 15 and engaging the inner walls of upright 11. This spring support may take a number of forms and several of such forms have been illustrated. In Figures 1, 2 and 3, piston 15 is shown provided with an annular groove 22 for accommodating a spring ring 23 which is sinuously bent to form indentations 24, which hold the ring in groove 22, and projections 25, which engage the inner walls of upright 11 and frictionally support the piston and extension 14.

The piston 28, shown in Figure 4, is the same as that shown in Figure 3 with the exception that groove 22 is omitted and a spring support 29 is provided having its ends secured to the underside of piston 28 adjacent the periphery thereof at diametrically opposite points and is preferably provided with one or more turns or loops 30 near its center so that sufficient resiliency is provided to force its sides 31 to the support against the inner walls of upright 11 for frictionally supporting piston 28.

The piston 33, shown in Figures 6 and 7, is identical with piston 15 with the exception that the groove 34 is somewhat larger than groove 22 and is preferably semicircular in cross-section in piston 15 so as to accommodate a spirally wound spring 35 which has its ends secured together to form an annular coil whose outer surface is adapted to engage the inner walls of upright 11 for frictionally supporting piston 33 in selected positions.

The piston 37 shown in Figure 8 is identical with piston 28 and has two or more spring fingers 38 secured on its under face which are adapted to engage the inner walls of upright 11 for frictionally supporting piston 37 in selected positions. Spring fingers 38 may each consist of a bent strip of spring metal or they may be bent tongues extending from an apertured disk secured to the underside of piston 37; the disk being apertured to accommodate the flexible electrical conductors.

In extending and retracting extension 14, it is possible that it may be rotated and cause the electrical conductors to become twisted and tangled inside of upright 11, making it desirable to hold extension 14 against rotation relatively to upright 11. This may be accomplished by providing the inner wall of upright 11 with a vertically disposed guide 40 which is straddled by a notch 41 formed in piston 15. Upright 11 may be easily provided with a guide 40 by securing the ends of a straight piece of stiff wire to its wall. Pistons 28, 33 and 37 are also provided with notches for accommodating guide 40 and, as they are similar to notch 41 and perform the same function, they have been given the same reference number.

The device as hereinbefore illustrated in several modifications is illustrative of the principles of the invention and it is to be understood that the device may be further modified and changed within the scope of the invention as herein set forth and within the scope of the appended claims.

I claim:—

1. A lamp including a tubular standard, a reducing sleeve secured to the top of the standard, a tubular extension slidable in the sleeve and standard, a piston on the extension having a notch, a guide secured in the standard and extending through the notch, and spring means on the piston engaging the walls of the standard for supporting the extension.

2. A lamp including a tubular standard, a reducing sleeve secured on the top of the standard, a protective bushing in the sleeve, a tubular extension telescoping with the bushing and standard, a guide secured in the standard, a piston fixed on the extension and having a notch slidable on the guide, and a spring carried by the piston engaging the walls of the standard.

In testimony whereof I have signed my name to this specification.

WILLIAM TURSE.