Dec. 27, 1938. E. J. HAUSER 2,141,909

FLOOR LAMP WITH CORD TAKE-UP DEVICE

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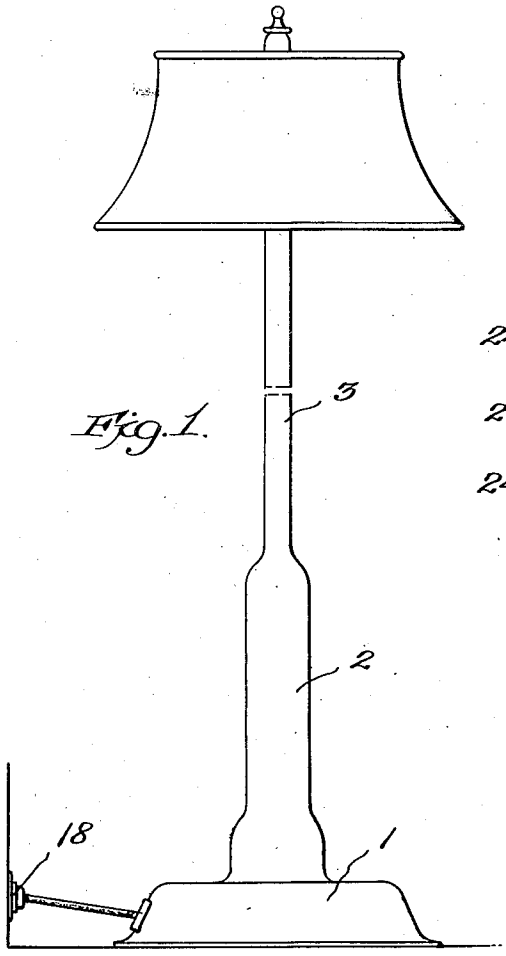


Fig. 1.

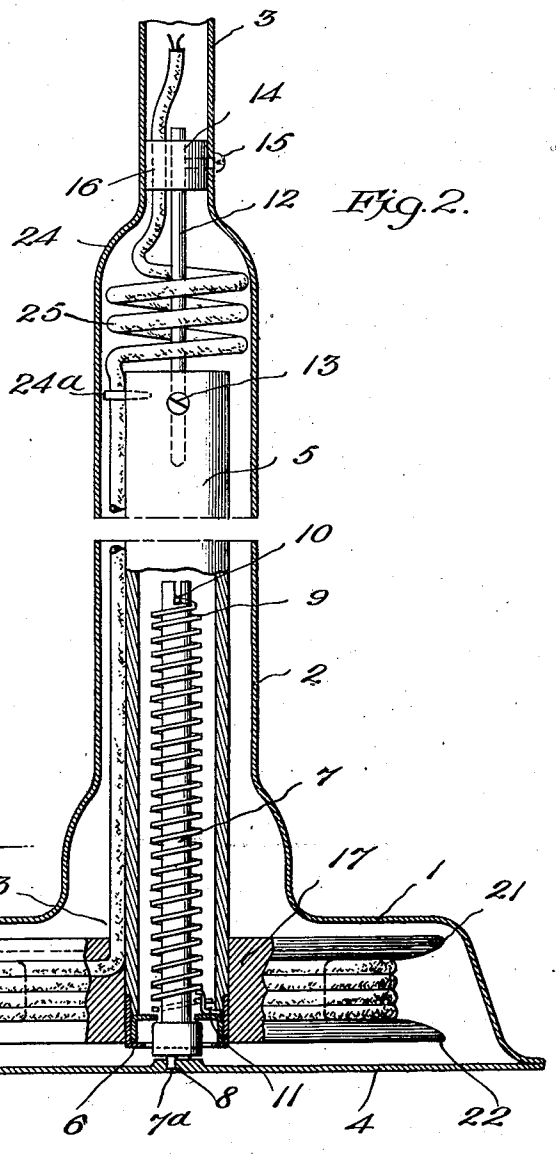


Fig. 2.

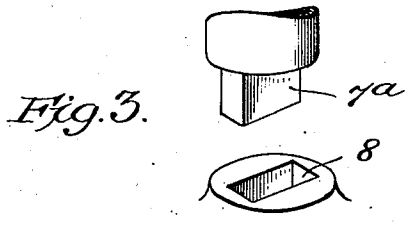


Fig. 3.

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FLOOR LAMP WITH CORD TAKE-UP DEVICE

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1 Claim. (Cl. 242—107)

The present invention relates to floor lamps, and, more particularly, to a floor lamp of novel and improved character having a cord take-up device incorporated therein.

As those skilled in the art know, heretofore, floor lamps have generally been provided with a length of cord one end of which was wired to the lamp socket or sockets of the floor lamp, the other end thereof bearing a conventional plug or similar connecting device for connecting the lamp to an electrical outlet. As in normal use the floor lamp is frequently displaced to various positions on the floor in accordance with the preference of the user, it was customary to provide a substantial length of cord, generally of at least 6 feet or over in length in order to permit adjustment and displacement of the lamp within a region determined thereby. Of course, this conventional procedure and arrangement had various disadvantages. Thus, in most positions of the floor lamp a considerable length of loose and slack wire or cord was laying on the floor. This not only presented an unsightly appearance and interfered with various activities about the house, such as housecleaning, but frequently it was liable to be tripped over whereby not only the lamp was often damaged or broken, but not infrequently personal injury and accidents were caused. This danger was particularly serious when children or household pets used the room to any substantial extent. Moreover, the range within which the floor lamp could be displaced was necessarily restricted as for the above reasons, the length of the cord was maintained as short as possible, to reduce the above dangers and disadvantages to a minimum.

It was already suggested to provide an automatic take-up attachment for the cords of various electrical devices, principally telephones, and the like. All of these devices involved a spring-held reel on which the extension length of the wire or cord was wound and a spare length of said cord was wound above said reel and independently therefrom in an opposite direction. All of these devices, however, had the disadvantage that they required a rather substantial space so that they had to be mounted in a separate box or casing, or the casing of the phone, and the like, had to be considerably increased to provide sufficient space for the take-up mechanism. Moreover, the conventional take-up devices required a powerful operating spring and various relatively expensive parts not readily obtainable on the market so that their price was beyond the range the public was willing to pay for the convenience provided. Therefore, none of these various suggestions and prior attempts was completely satisfactory and successful or has met with public acceptance to any substantial extent. More particularly, none of the prior suggestions and attempts was capable of being embodied into conventional floor lamps without requiring great changes in the conventional and accepted design thereof.

I have discovered that the problem may be solved in a remarkably simple manner.

It is an object of the present invention to provide a floor lamp having a cord take-up device incorporated therein which is free from the disadvantages and inconveniences of conventional take-up devices.

It is another object of the present invention to provide a floor lamp having an automatic take-up device of novel character incorporated therein which does not require any more space than is available within the base and the neck portion of a conventional floor lamp and which may be directly installed within conventional floor lamps without requiring substantial changes in the form, design or method of manufacture.

It is a further object of the present invention to provide an automatic take-up device for floor lamps and similar devices having a base portion and a neck portion of accentuated length which requires a minimum of space and only a few simple parts most of which are readily obtainable on the market and which do not have to be specially designed or built for the purpose contemplated.

The invention also contemplates an automatic take-up device for floor lamps capable of automatically taking up a substantial length of cord or wire and permitting easy withdrawal of part or all of the wire according to requirements without having any excess length of wire on the floor at any time.

It is also within contemplation of the invention to provide a novel and improved take-up device for floor lamps which is simple in construction, easy and inexpensive to manufacture and which may be readily manufactured and sold on a practical and commercial scale at a low price.

Other and further objects and advantages of the invention will become apparent from the following description taken in conjunction with the accompanying drawing, in which—

Fig. 1 illustrates a side elevation of a floor lamp embodying the principles of the present invention;

Fig. 2 depicts a vertical sectional view, somewhat fragmentary, and having parts in elevation,

of the lower portion of the floor lamp shown in Fig. 1, drawn to a larger scale; and

Fig. 3 shows an enlarged and fragmentary detail view of the lower end of the spindle supporting the take-up reel.

Broadly stated, according to the principles of my invention, I provide a floor lamp having a base portion and a neck portion. The base portion may be of a circular character although, of course, a base of square or polygonal character may be employed with equal or similar results. Within this base I provide a reel of very restricted height and having sufficient winding space to take up the desired length of extension cord. This reel is operatively associated with the take-up mechanism proper constituted of a cylindrical member of accentuated height and of such dimensions as to readily fit within the neck portion of the floor lamp. The cylindrical member is rotatable around a stationary spindle or spindles and is connected thereto by means of a long helical spring one end of which is attached to the cylindrical member and the end thereof being attached to the stationary spindle. Preferably, the reel is rigidly connected with or is mounted on the lower extremity of said cylindrical member so that during the rotation of the reel when unwinding the cord, the cylindrical member is rotatively displaced with respect to the stationary spindle and winds up the coil spring whereby energy is stored which is capable of being released for winding up the cord. The free and outer end of the cord is passed through a suitable opening provided in the base of the lamp while the other extremity thereof is carried through a hole in the top surface of the reel, is passed along the side of the cylindrical member up to the upper portion of the neck where an extended spare length wound in the same direction is provided. After this spare length, the cord is introduced into the lamp socket or sockets in the top portion of the lamp in conventional manner.

Although various forms of construction may be employed for the cylindrical member and for its cooperating parts, such as the spindle and the helical spring, I have found that a construction such as used in the conventional spring actuated window shades is admirably suited for the purposes of the present invention. As those skilled in the art know, the actuating mechanism of conventional window shades essentially comprises a long and hollow cylindrical member having a spindle therein and a helical spring connecting said cylindrical member to the stationary spindle. This window shade mechanism is manufactured in large quantities in all possible sizes so that a size which is adaptable to a floor lamp of particular dimensions is readily obtainable in quantities at an extremely moderate price.

The invention will now be described more fully to those skilled in the art, reference being had to the accompanying drawing.

The construction and the operation of my improved floor lamp will be best understood from Fig. 2. A hollow base portion 1 is connected to or is integrally formed with a neck portion 2. This neck portion 2 may be of a uniform width throughout or, as is shown in the drawing, it may be provided with a somewhat constricted upper portion 3. The bottom opening of the base 1 is covered by means of a base plate 4 which is preferably a heavy iron or metal plate in order to impart stability to the complete structure. Within the lamp is mounted the take-up mechanism comprising a hollow cylindrical member 5. As it will be noted from the drawing, the lower end of cylindrical member 5 is provided with a metal collar 6 which is rotatably mounted on a spindle 7. The lower end 7a of spindle 7 is of such shape as to be rotationlessly held in a hole 8 of base plate 4 (Fig. 3). Spindle 7 has a helical spring 9 provided thereon, one end of which is held in a slot 10 of the upper end of the stationary spindle, while the lower end thereof is rigidly connected to the inner face of the cylindrical member at 11. A pin or axle 12 is connected by means of a screw 13 to the upper end of the cylindrical member. The upper end of pin 12 is journaled in a ring 14 which is retained in the neck of the lamp by means of a screw 15. Ring 14 is also provided with a hole 16 through which the cord or wire may pass.

A reel 17 is rigidly mounted on the lower end of the cylindrical member 5 and is of such dimensions as to readily fit into the relatively flat conventional lamp base. The inner end of the cord is passed through a hole 23 provided in the central portion of the reel, leaving 6 feet or more of the cord to be wound around the reel. From here the cord is passed along the side of the cylindrical member up to the upper space 24 where it is securely fastened to the cylindrical member with a staple or similar device 24a and around pin 12 where it forms a spare length coil 25, loosely wound in the same direction as the cord on the reel. From the spare length coil, the cord passes through a hole 16 in ring 14 where it may again be fastened by means of a staple and then to the upper portion of the lamp into a lamp socket (not shown) which is electrically connected thereto, in conventional manner. The other end of the cord is wound or coiled in the space between plates 21 and 22 of the reel, the free end being passed through a hole 20 provided in the side of the base portion of the lamp and has a conventional plug 18 attached thereto. The general appearance of the floor lamp embodying the principles of the invention will be apparent from Fig. 1.

From the preceding description, the operation of my novel floor lamp and take-up device will be readily understood by those skilled in the art. When the lamp is first assembled, care is taken that the full length or approximately the full length of the extension cord should be wound up upon the reel in the released condition of coil spring 9 and that likewise in this normal position of rest the spare length coil 25 is loosely wound. When it is now desired to connect the lamp to an electric outlet box, all that is needed is to pull the plug and the cord connected thereto from the base of the lamp until the length of the free cord is sufficient for the insertion of the plug into an outlet box. This operation will automatically tension coil spring 9 during the rotation of the reel when unwinding the cord. The moderate tension of the spring will be sufficient to maintain the cord taut but will be insufficient to displace or move the floor lamp from its selected position. When releasing the plug or when moving the lamp in such a manner as to decrease the distance between the lamp and the plug, the extra length of the cord will be automatically taken up by the reel which is now turned in the reverse direction by the tension of spring 9. During the rotation of the reel when unwinding the cord, the windings of the spare length coil 25 are wound up, and are loosened again during

the taking-up rotation of the reel and of the cylindrical member.

It is to be noted that the lamp embodying the principles of the present invention provides a number of important advantages.

It is also to be observed that the take-up device of the invention completely eliminates the inconveniences and dangers connected with the conventional free extension cords and permits to displace the floor lamp within a substantial radius from the outlet box without the presence of unsightly and dangerous loose wires on the floor.

Moreover, the take-up device of my invention is extremely simple in construction and involves merely a few and extremely cheap parts most of which are readily obtainable on the market and do not require any special production for the purpose contemplated. Therefore, the floor lamp of the invention provides a substantial operating advantage without adding to any great extent to the cost of production.

Although the present invention has been described in connection with a preferred embodiment thereof, variations and modifications may be resorted to by those skilled in the art without departing from the principles of the invention. I consider all of these variations and modifications as within the true spirit and scope of the present invention as disclosed in the present description and defined by the appended claim.

I claim:

In a floor lamp having a relatively low circular base portion with a base plate and a neck portion of accentuated height, a cord take-up mechanism for said lamp, said take-up mechanism comprising in combination a spindle having its lower end rotationlessly inserted into a hole of said base plate and having its other end extending upwardly into said neck portion, a hollow cylindrical member of accentuated height substantially conforming to the inner dimensions of said neck portion surrounding said spindle, a metal collar connected to the lower end of said cylindrical member rotatable around said spindle, a pin connected to the upper end of said cylindrical member, a bearing for said pin, a long helical spring having its ends connected to said spindle and said cylindrical member respectively, a take-up reel of restricted height rigidly mounted on the lower end of said cylindrical member and substantially conforming to the inner surface of said base portion, and a lamp cord wound on said reel and carried upwards along one side of said cylindrical member to form a spare length coil loosely wound around said pin in the same direction as on said reel whereby a predetermined length of cord may be unreeled causing tensioning of said helical spring and may be wound up by said spring.

EDWARD J. HAUSER.