

Oct. 1, 1929.

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1,730,104

ELECTRICAL EXTENSION CONDUCTOR AND REEL

Filed Oct. 16, 1920

2 Sheets-Sheet 1

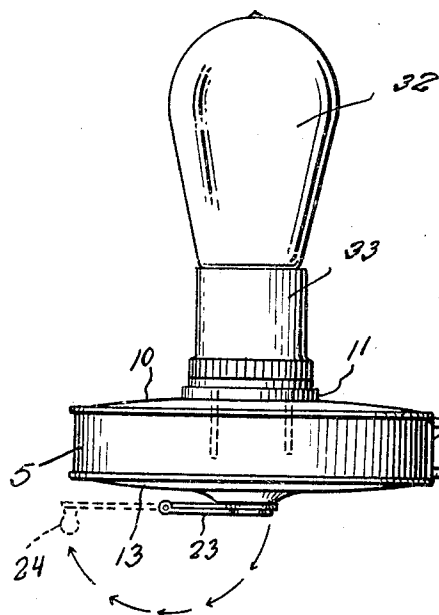


Fig. 1.

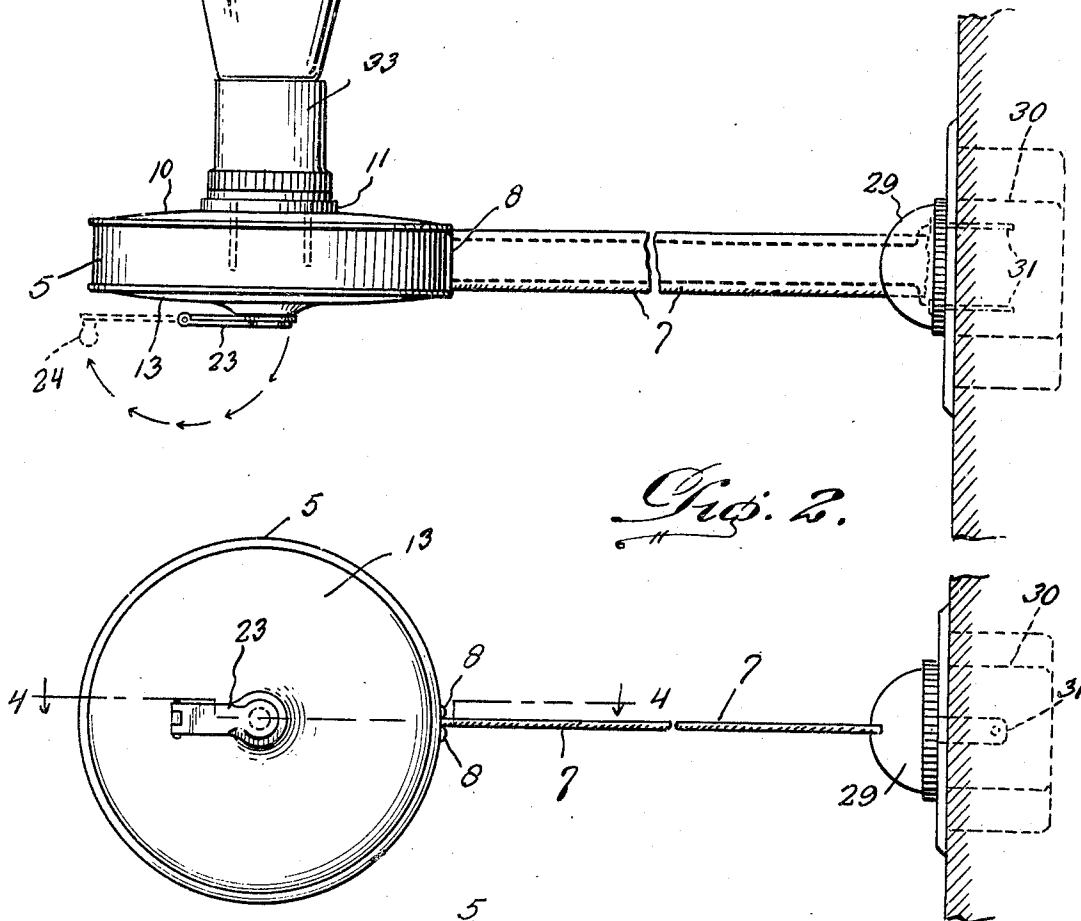


Fig. 2.

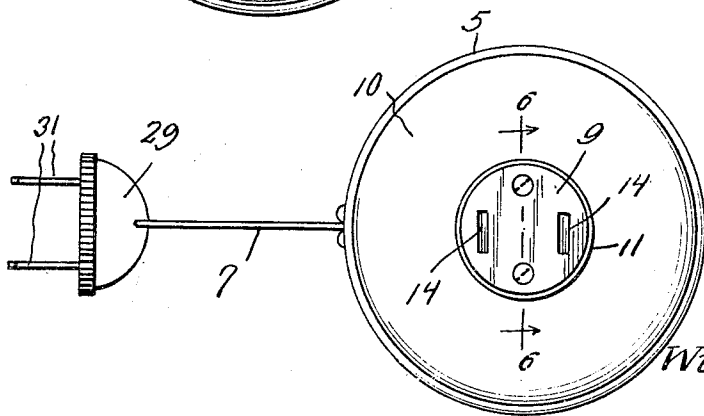


Fig. 3.

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Fig. 4.

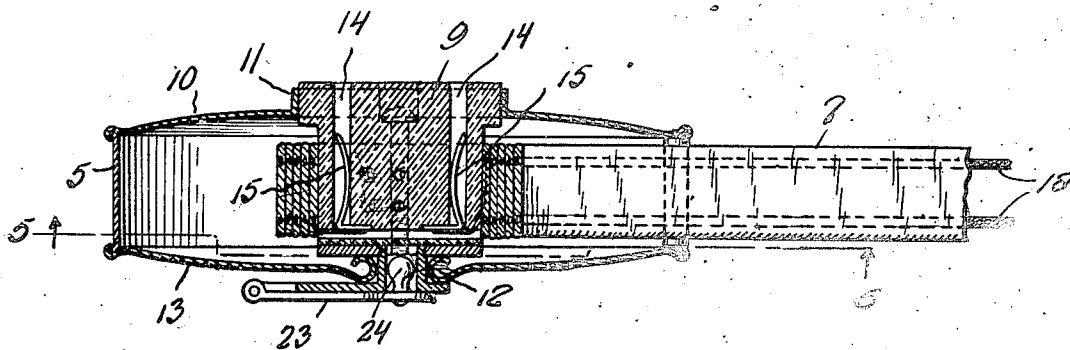


Fig. 5.

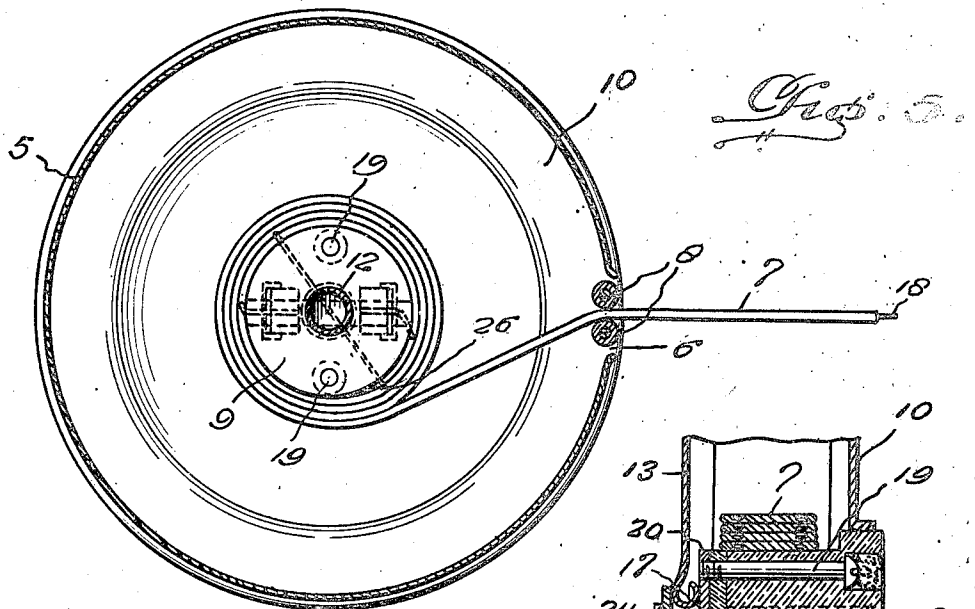


Fig. 7.

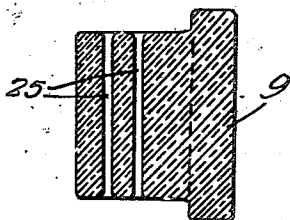


Fig. 6.

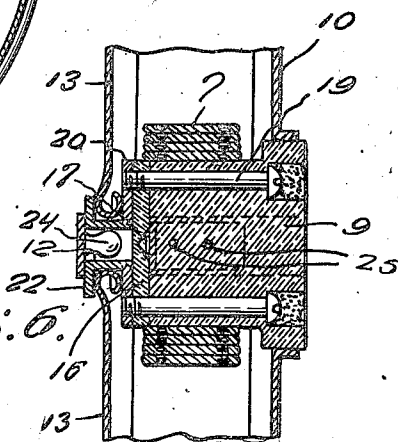
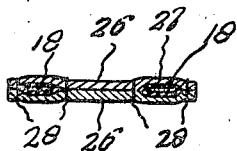


Fig. 8.



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ELECTRICAL EXTENSION CONDUCTOR AND REEL

Application filed October 16, 1928. Serial No. 312,827.

This invention relates to an electrical extension conductor and reel for connecting an appliance or translating device to a wall receptacle or the like, so that the appliance or translating device may be located at any suitable distance from the wall receptacle and any objectionable slack in the conductor readily taken up.

The primary object of the present invention is to provide a device of the above kind which may be conveniently stored or carried in the pocket when not in use, and which embodies means for readily rolling the conductor into compact form within a casing.

A further object is to provide an extension conductor and reel of the above kind which is simple and durable in construction, and economical to manufacture, and wherein the conductor is of tape-like form for being passed under rugs and carpets without causing an objectionable raised ridge therein.

Still another object is to provide an improved extension conductor and reel of the above kind wherein an attachment plug receptacle or socket member is effectively employed as the winding reel for the conductor, and wherein said attachment plug receptacle or socket member is so mounted in the casing of the reel as to permit the attachment plug of the electrical appliance or translating device to be readily plugged therein for making electrical connection with the wires of the conductor.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is an elevational view of the extension conductor and reel in use in connection with a wall receptacle and an electric lamp.

Figure 2 is a bottom plan view of the device shown in Figure 1.

Figure 3 is a top plan view of the device shown in Figure 1 with the lamp and its socket removed, and with the conductor substantially entirely wound upon the reel with

its attachment plug disconnected from the wall receptacle.

Figure 4 is an enlarged section taken on line 4—4 of Figure 2.

Figure 5 is a section taken on line 5—5 of Figure 4.

Figure 6 is an enlarged fragmentary section taken on line 6—6 of Figure 3.

Figure 7 is a central longitudinal section of the insulating body of the attachment plug receptacle or socket member forming the winding reel of the device; and

Figure 8 is an enlarged transverse section of the conductor.

In the embodiment of the invention illustrated in the drawings, there is provided a flat hollow casing 5 of circular form provided with a peripheral opening or slot 6 through which the conductor 7 is freely passed, a pair of anti-friction rollers 8 being journaled in the opening 6 so that the conductor 7 may be passed therebetween for being effectively protected against chafing when drawn into or out of the casing 5.

Journaled centrally of and within the casing 5 is an attachment plug receptacle or socket member having a body 9 of insulating material which forms the reel upon which the conductor 7 is adapted to be wound. The body 9 has its outer end journaled in and exposed through a relatively large opening in one side wall 10 of the casing 5, the wall 10 having an annular flange 11 about this opening to present a wide bearing surface for the body 9 at this point. Attached to the other or inner end of the body 9 is a stub shaft or spindle 12 journaled in a relatively small central opening of the other or opposite side-wall 13 of the casing 5, thus completing the rotatable mounting of the attachment plug receptacle or socket member in said casing.

The attachment plug receptacle or socket member of the device is of generally well known construction, wherein the body 9 is provided with a pair of longitudinal openings or passages 14 into which the contact pins of a conventional attachment plug are adapted to be forced for making electrical connection with the usual contact springs or strips 15 that are disposed and secured within the

openings or passages 14. Flatly disposed against the inner end of the body 9 is a disk 16 of insulating material having a diametric groove 17 in its inner face to provide a passage through which the bared ends of the wires 18 of the conductor 7 may be conveniently passed for suitable and convenient connection with the adjacent ends of the respective spring contact strips 15. The disk 16 is firmly fastened to the end of the body 9 by means of a pair of bolts 19 which pass through a second pair of longitudinal openings provided in the body 9 and are threaded into screw-threaded openings of a metal plate or disk 20 firmly riveted or attached to the inner end of the stub shaft 12. Obviously, the stub shaft 12 is rigidly attached to the body 9 of the attachment plug receptacle or socket member by these means. The outer end of the stub shaft 12 may be flanged as at 21 to engage the outer face of the wall 13 about the adjacent opening, thereby securely retaining the attachment plug receptacle in place within the casing.

While the reel-forming body 9 may be associated with spring means for normally winding the conductor 7 thereon, the body 9 is shown as provided with manually operable means for turning the same to accomplish this purpose. This manual means consists of a folding handle 23 having one section rigid with the flange 22 of the stub shaft 12, and a swinging section having a knob 24 at the free end thereof. In order to accommodate the knob 24 when the handle is folded, the stub shaft 12 is preferably of hollow open-ended form as shown clearly in Figures 4 and 6.

The body 9 of the attachment plug receptacle is preferably provided with a pair of diametric passages or openings 25 to accommodate stitching 26 by means of which the inner end of the conductor 7 is attached to said body 9 for being wound upon the latter when said body is rotated.

It will be noted that the conductor 7 is of flat tape-like form, and as shown, the same consists of a pair of superimposed ribbons 26 of fabric or suitable insulating material stitched together along and adjacent their longitudinal edges to provide a pair of spaced longitudinal hems through which the wires 18 extend. The conductor wires 18 are preferably of flat braided form and have a suitable covering of insulation as at 27. The rows of stitching to form the hems or pockets for the conductor wires 18 are indicated generally at 28. A conventional form of attachment plug 29, adapted for cooperation with a wall receptacle 30 or the like, is attached to the outer end of the conductor 7 by having the conductor wires 18 connected to the terminals of the contact pins 31 of such attachment plug 29.

In the use of the invention illustrated, the plug 29 is engaged in the wall receptacle 30,

and an electric lamp 32 is engaged in the socket member 33 of an adapter having contact pins adapted to be plugged into the passages 14 for engaging contacts 15. In this way the current is supplied to the lamp 32, and by unwinding the conductor 7 from the body 9, the lamp may be extended to any desired point remote from the wall receptacle without leaving any objectionable slack in the conductor 7 outside of the casing 5. However, it is obvious that the attachment plug of any suitable appliance or translating device may be plugged into the body 9, and due to the flat form of the conductor 7, it may be extended under carpets or rugs without producing objectionable raised ridges in the latter. By unfolding the handle 23, it may be utilized to wind the conductor in the casing 5 when the device is not required for use.

From the above description it is believed that the construction, advantages, and manner of use of the invention will be readily understood and appreciated by those skilled in the art. It is apparent that the invention provides a very simple, durable and compact construction in which a conventional attachment plug receptacle or socket member is effectively utilized as the winding reel and is so mounted in the casing as to permit an attachment plug to be readily engaged therewith at one side of the casing to place the wires of the conductor 7 in electrical connection with the wires of an appliance or translating device carrying said attachment plug. Further, only so much of the conductor 7 as is needed is unreel, thereby protecting the remainder from damage and wear.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. An electrical extension conductor and reel comprising a casing, an attachment plug receptacle having a body of insulating material provided with longitudinal passages and terminal contacts within said passages respectively adapted for reception of and engagement by the contact pins of an attachment plug, said body having its outer end journaled in and exposed through one side of the casing, a tape-like conductor having one end attached to said body and having its wires connected to the respective terminal contacts of said receptacle, a hollow stub shaft rigidly secured to the inner end of said body and journaled in the opposite side of said casing, and an attachment plug connected to the other end of said conductor.

2. An electrical extension conductor and reel comprising a casing, an attachment plug receptacle having a body of insulating material provided with longitudinal passages and terminal contacts within said passages respectively adapted for reception of and engagement by the contact pins of an attach-

ment plug, said body having its outer end journaled in and exposed through one side of the casing, a tape-like conductor having one end attached to said body and having its
5 wires connected to the respective terminal contacts of said receptacle, a hollow stub shaft rigidly secured to the inner end of said body and journaled in the opposite side of said casing, and an attachment plug connected to the other end of said conductor,
10 and a foldable handle carried by the outer end of said stub shaft.

3. An electrical extension conductor and reel comprising a casing, an attachment plug
15 receptacle having a body of insulating material provided with longitudinal passages and terminal contacts within said passages respectively adapted for reception of and engagement by the contact pins of an attachment plug, said body having its outer
20 end journaled in and exposed through one side of the casing, a tape-like conductor having one end attached to said body and having its wires connected to the respective terminal
25 contacts of said receptacle, a hollow stub shaft rigidly secured to the inner end of said body and journaled in the opposite side of said casing, and an attachment plug connected to the other end of said conductor, and a fold-
30 able handle carried by the outer end of said stub shaft, said stub shaft being of hollow open-ended form, said handle having a knob positionable within said stub shaft when the handle is folded.

35 4. An electrical extension conductor and reel comprising a casing, an attachment plug receptacle having a body of insulating material journaled in and exposed through one side of the casing at its outer end, said body
40 having longitudinal contact pin receiving passages and terminal contacts within said passages exposed at the inner end of said body, an insulating disk upon the inner end of said body provided with a diametric
45 groove, a tape-like conductor attached at one end to said body and having its conductor wires extended through said groove of the insulating disk and connected to the terminal contacts of the body, a stub shaft journaled in
50 the opposite side wall of the casing and having a plate secured to the inner end thereof, and bolts extending through the body and the insulating disk and threaded into the plate of the stub shaft for rigidly securing the parts
55 together.

In testimony whereof I affix my signature.
WILLIAM G. WHEAT.