April 21, 1942. R. C. WITTMAN 2,280,680

ELECTRIC LIGHT CORD EXTENSION

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Fig. 1.

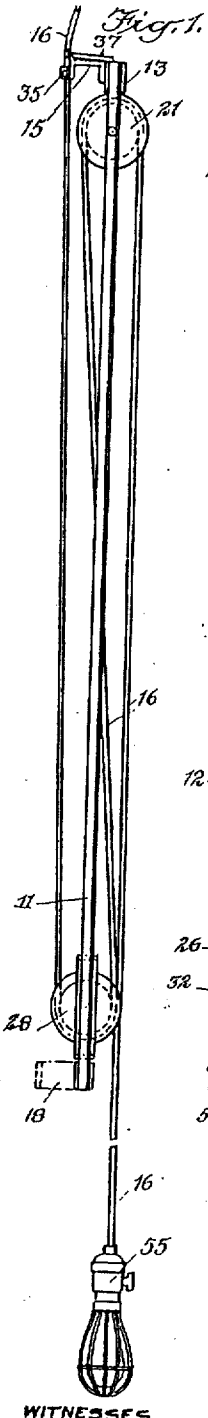


Fig. 2.

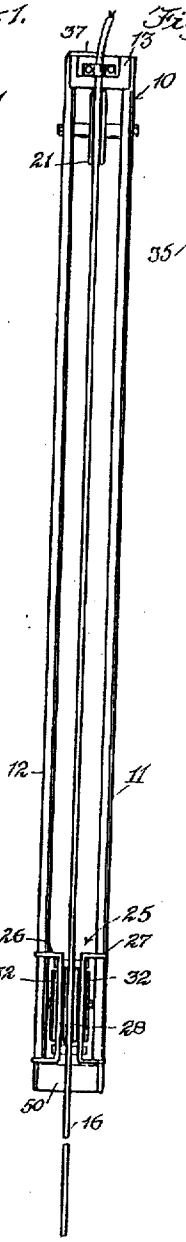


Fig. 3.

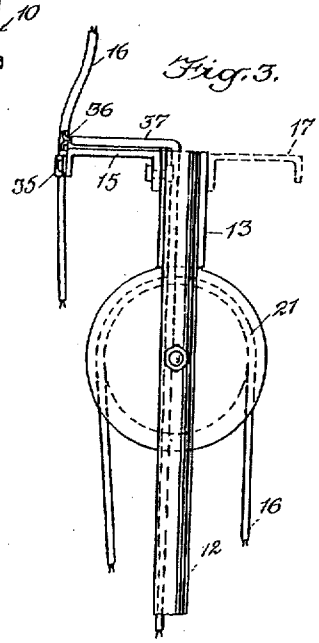


Fig. 4.

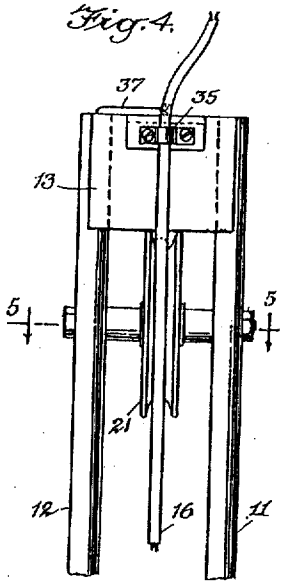
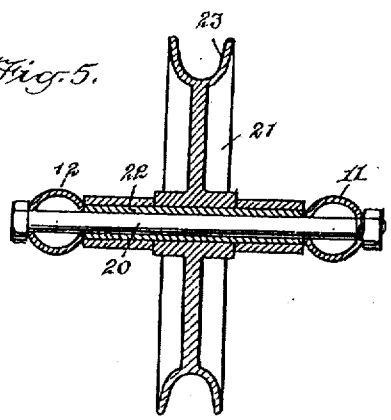


Fig. 5.



WITNESSES

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Fig. 6.

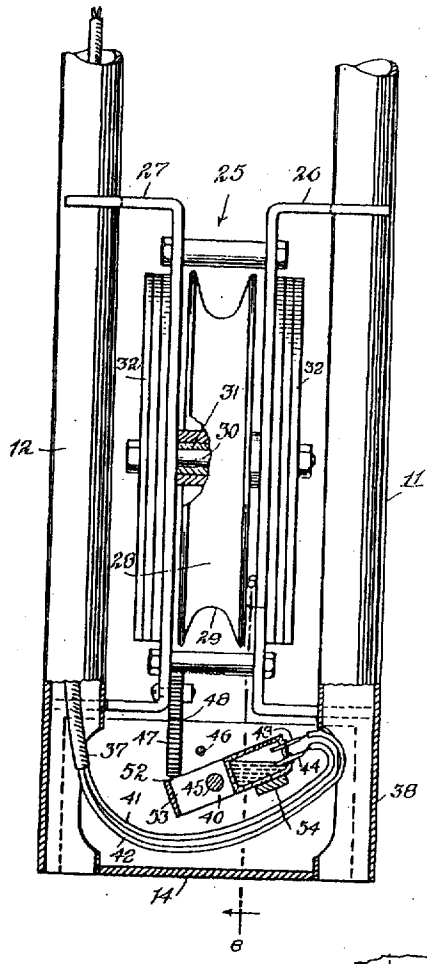


Fig. 7.

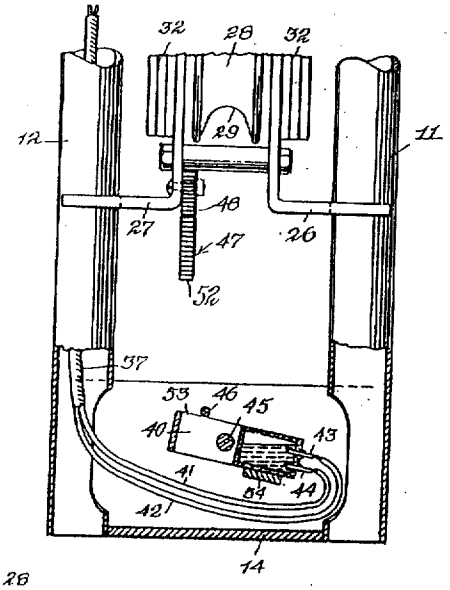
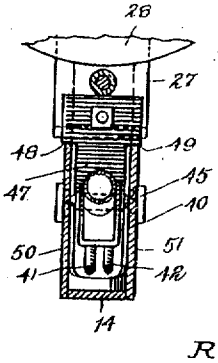


Fig. 8.



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ELECTRIC LIGHT CORD EXTENSION

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Application March 21, 1941, Serial No. 384,488

3 Claims. (Cl. 200—153)

This invention relates to extension cords, and more particularly to an apparatus designed to handle electric light cord in such a way that the cord may be extended and retracted automatically.

An object of the invention is to provide a device of the character described, which may be simply and easily positioned on the walls or roof of a garage, factory, or other building, and from which an electric light cord may be extended or retracted at will.

A further object is to provide a device of the same general description, in which the cord may be extended to any desired point within limits, and in which the cord will remain at said desired point until retracted.

A further object is to provide a device of the character described, in which the cord will be protected against undue wear or injury, and in which the current flowing through said cord will be automatically shut off when the device is in its fully retracted position.

Various other objects and advantages of my invention will be apparent as the description proceeds.

In the drawings—

Fig. 1 is a side elevation showing my device with the cord retracted;

Fig. 2 is a front elevation in the same position;

Fig. 3 is a fragmentary side view showing the positioning of the upper pulley;

Fig. 4 is a rear view of the same portion shown in Fig. 3;

Fig. 5 is a cross-sectional view taken on the line 5—5 of Fig. 4;

Fig. 6 is an enlarged view of the lower end of the device showing the operation of the switch with the circuit open;

Fig. 7 is a view similar to Fig. 6 with the circuit closed;

Fig. 8 is a view taken on the line 8—8 of Fig. 6.

I provide a frame 10 having two upright members 11 and 12. While the uprights 11 and 12 may be of any suitable material, I have found that tubular steel is best adapted for the purpose.

The uprights are joined at their upper portion by the cross piece 13 and at their lower portions by a cross member 14. The bracket 15 extends from the cross piece 13 to engage the light cord 16. A conventional mounting attachment, such as the bracket 17 or 18, may be applied to position the device with relation to the building in which it is mounted.

Mounted in the upper portions of the upright by means of the axle 20 is a pulley 21. A suitable bearing 22 may be provided for smooth operation and the axle 20 may consist of a bolt extending through the uprights. The pulley 21 is provided with a groove 23.

Slidably mounted on the uprights 11 and 12 is a pulley carriage 25 having spaced members 26 adapted to engage the upright 11, and similar members 27 adapted to slidably engage the upright 12.

Mounted in the pulley carriage 25 is a pulley 28 provided with a groove 29 and pivoted on the axle member 30. Suitable bearings 31 may be provided for the pulley, and the axle 30 may consist of a bolt extending beyond the sides of the carriage. Removable weight members 32 may be positioned on the bolt axle 30 so that the weight of the carriage may be adjusted to compensate for different conditions.

The electric light cord 16 is positioned on the bracket 15 by means of the clamp 35 or by any other suitable means. The cord is spliced at 36 to provide an extension 37 extending through the upright 12 to the base 38.

Mounted in the base 38 is a mercury switch 40 to which the wires 41 and 42 of the cord 37 lead and engage contacts 43 and 44. The mercury switch 40 is pivoted at 45 and a stop 46 is provided to limit its movement. A depending member 47 is fastened to the sliding member 27 and is provided with shoulders 48 and 49 adapted to engage the side walls 50 and 51 of the base 38 when the carriage is in its lowest position. This will allow the end 52 of the depending member 47 to contact the end 53 of the mercury switch 40 to uncover the contact point 43 and break the flow of current through the cord 37 and 16.

The cord 16 extends from the bracket 15 down under the pulley 28 and up over the pulley 21. A light bulb socket 55 is fixed to the end of the cord 16.

In operation it will be seen that the device in the fully retracted position shown in Fig. 6, will be without current due to the action of the depending member 47 on the mercury switch 40. However, as the cord is pulled out the pulley carriage 25 will be raised allowing the weighted member 54 to pivot the switch 40 on the pivot 45 and bring the mercury about the points 43 and 44, thus closing the circuit. As the cord is extended, the carriage 25 will slide upwardly on the uprights. Since the weight of the cord and the weight of the pulley carriage 25 will be balanced due to the addition or subtraction of the plates 32, the carriage will maintain its position along the uprights and the cord may be left in any

extended position. When it is desired to retract the cord, it may be fed into the device and the weight of the carriage 25 will cause it to be retracted. When the cord is fully retracted and out of use, the current will be completely shut off by the switch 40.

I claim:

1. A cord extension device comprising a pair of members spaced in parallel relationship, a pulley mounted between said members at one end thereof, a pulley carriage member slidably mounted between said members, said pulley carriage member comprising a pair of sliding members having relatively widely spaced flanges engaging said first-mentioned members, a pulley mounted between said sliding members, an axle extending through said pulley and engaging said members, and means on said axle for varying the weight of said pulley carriage.

2. In a device of the character described, a pair of spaced rigid members, a pulley mounted between said members at one end thereof, a pulley carriage slidably mounted between said members, an electric cord extending from adjacent said fixed pulley around said pulley carriage and around said pulley, a pair of wires engaging said first-mentioned cord and extending through one of said rigid members to the opposite end of said device, a pivotal switch cooperating with said wires, and a member on said pulley carriage adapted to engage said switch to open said switch when said carriage is at the point farthest from said fixed pulley.

3. In an electric cord extension device, a pair of rigid members joined at either end, a fixed pulley between said members at the top thereof and a base at the opposite end, a pulley carriage slidably mounted between said rigid members, said pulley carriage comprising a pair of supporting members having flanges for slidable engagement with said rigid members, a pulley mounted between said supporting members, weight members removably mounted on said supporting members, a depending member having shoulders adapted to engage the base to limit the downward motion of said pulley carriage, a pivotal switch mounted in said base, and an extension on said depending member adapted to open said switch when said carriage is in its downward position.

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