

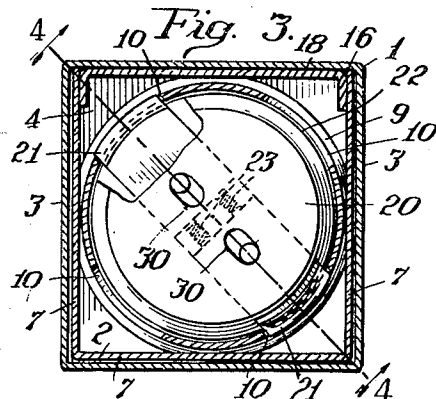
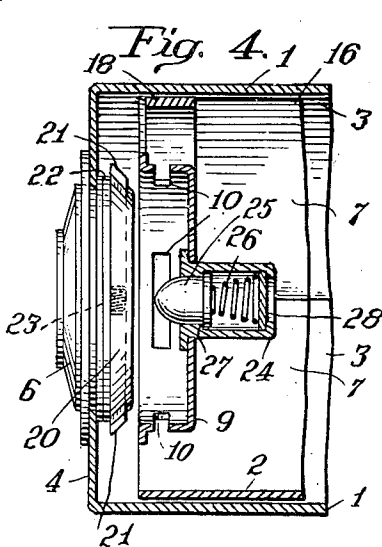
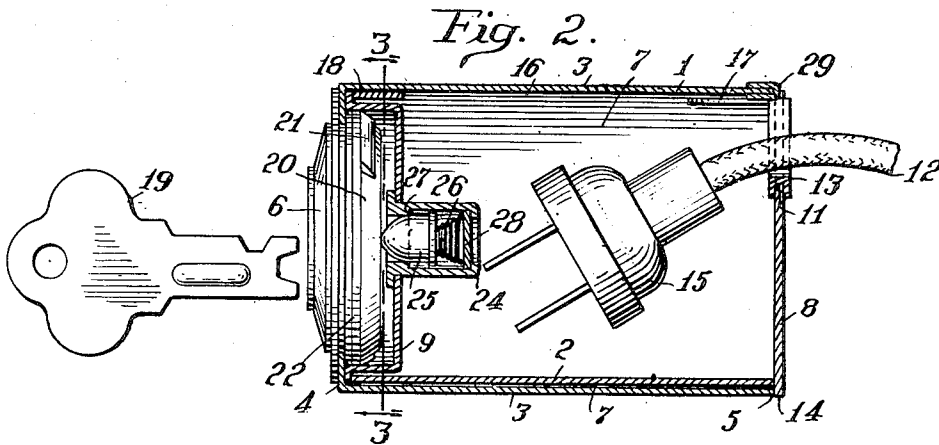
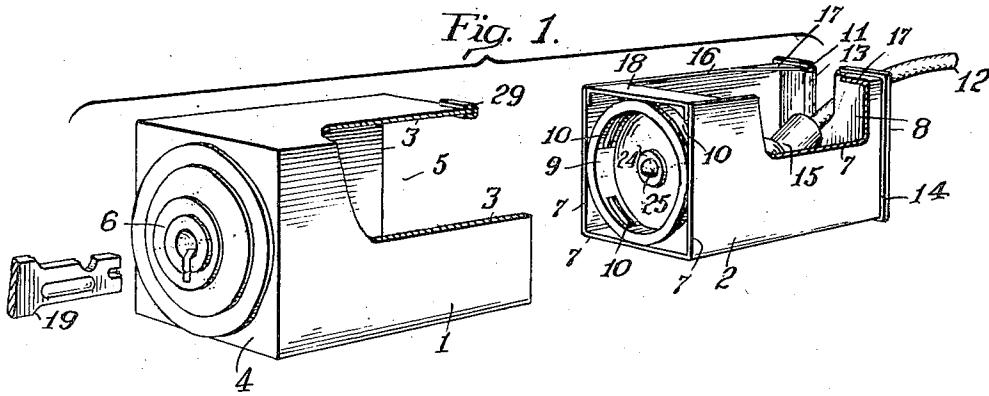
June 30, 1953

B. W. ROCKMAN

2,643,787

LOCKABLE CONTAINER FOR ELECTRICAL CONNECTORS

Filed Nov. 24, 1950



Inventor
Benjamin W. Rockman

Quo & W. D. Dand

Attorney

UNITED STATES PATENT OFFICE

2,643,787

LOCKABLE CONTAINER FOR ELECTRICAL CONNECTORS

Benjamin W. Rockman, Takoma Park, Md.

Application November 24, 1950, Serial No. 197,413

5 Claims. (Cl. 220—3.2)

1

This invention relates to a safety or lock device known as a plug lock, a receptacle of metal or other suitable material, for all types of electrical equipment having a cord and plug by means of which plug said equipment is connected to operating current outlets. The particular construction and nature is more fully disclosed hereinafter.

The primary object of the invention is to provide a means by which the use of electrical equipment can effectively be denied those lacking consent for the use thereof.

As is well known, many novel devices have been manufactured, patented, and sold for the purpose of securing electrical outlets against unauthorized use such as is disclosed in the patent to Frederick E. Reinhold in Patent No. 1,783,342, which discloses a plug adapted to be locked into the position in the sockets of various receptacles, fuse boxes, cutouts and the like.

An object of my invention is to obviate the necessity of locking every electrical outlet to which electrical equipment may be connected for unauthorized use by the simple expedient of securing the equipment itself with a lock which prevents connection of the equipment to any electrical outlet.

A further object of the present invention is to provide a plug lock which, when properly constructed and insulated, can be used to prevent unauthorized use of live lines using plugs or jacks.

A more specific purpose of the present invention is to provide a safety device which, when used on plugs attached to machinery, will deny to children, in particular, and to other unauthorized individuals the use of power tools, electric irons, laundry equipment, kitchen equipment and other electrical devices, which when improperly used may cause serious bodily harm or property damage.

Still another object of this invention is to provide the owner of expensive equipment, such as television sets, electric lawn mowers, hedge clippers, to name a few, the privilege of granting or denying the use of the equipment as long as the plug is secured by a plug lock.

Other objects and advantages of this invention will become apparent from a study of the following specification, taken with the accompanying drawing wherein:

Fig. 1 is an exploded view in perspective of a plug lock.

Fig. 2 is an enlarged longitudinal sectional view.

Fig. 3 is a cross section on line 3—3 of Fig. 2.

Fig. 4 is a longitudinal section on line 4—4 of Fig. 3.

2

Referring more particularly to Fig. 1, 1 is a sleeve like container into which the sleeve 2 may be inserted and locked in place.

The outer sleeve 1 comprises closed side walls 3 and end wall 4 with an opening 5 on the end opposite the end wall 4. The outer sleeve 1 has built into its closed end wall 4 a trunk type locking means 6.

The inner sleeve 2 comprises three closed side walls 7, an end wall 8 and an opposite open end into which is positioned the keeper 9 of a trunk type lock in which are four keeper slots 10 (for a purpose to be subsequently described).

The rear end wall 8 of the inner sleeve 2 contains a cutout 11 of sufficient size to accommodate an ordinary insulated wire 12 therethrough. The edge of the cutout 11 is covered with a bead 13 to protect the insulation on the wire 12 from wear and damage in the insertion and removal of same. In addition, there is a flange 14 formed by extending the rear wall 8 beyond the side walls 7 and open top and which serves to make a tight joint when the inner sleeve 2 is fitted into the outer sleeve 1 and the device is in the closed or operative position, Fig. 2.

The plug 15 of an electrical device (not shown) is placed in the receptacle formed by the inner sleeve 2 with its connecting wire 12 leading into the receptacle through the cutout 11 in the rear wall 8 of the inner sleeve 2.

The open side 16 of the sleeve member 2 is provided with triangular shape braces 17 which are found on either side of the adjacent rear wall 8 to strengthen the inner sleeve and is additionally provided with a cross brace member 18 adjacent the open side 16 connecting opposite side walls 7 to strengthen the end opposite the rear wall 8.

After placing the plug 15 into the inner sleeve 2 in the manner indicated in Fig. 1, the inner sleeve is inserted into the outer sleeve 1 and snapped shut as illustrated in Fig. 2.

The plug 15 is now secured and may not be removed from the plug lock except by an authorized person using a key 19 to release the lock 20.

Upon insertion of the key 19 into the lock 20 and turning clockwise, the bolts 21 are forced to the opposite ends of their respective guide slots 30 in the casing 22 of the locking means 6 thereby withdrawing the bolts 21 from the keeper slots 10.

The bolts 21 are normally held in an extended position by springs 23 as indicated in Fig. 3. These springs 23 may be compressed by use of key 19 thus withdrawing the bolts 21 from the keeper slots 10 and thereby opening the lock or

by pressing the keeper 9 against the lock 20 when the two sleeves are engaged snapping the lock 20 shut without the use of a key.

The locking means 6 is provided on its keeper 9 with a bullet type ejector as indicated in Fig. 1 and Fig. 4. This comprises a cylindrical casing 24 in which is seated a bullet type ejector member 25 which is urged by a spring 26 to project beyond the cylindrical casing 24 and to seat on the internal shoulder 27 therein. The spring 26 is mounted on a rear plate 28 and is adapted to be compressed, as shown in Fig. 2, to allow the bullet member 25 to be received completely inside of the casing 24. Upon release of the lock 20 the spring 26 expands and the bullet type ejector 25 forces against the back of the lock 20 on the casing 22 and the inner sleeve 2 is forced or partially ejected from the outer sleeve 1 as shown in Fig. 4.

Referring to Fig. 1, there is indicated at 29 a stop bead soldered at the open end of the outer sleeve 1 and so located as to complete the bead 13 of the cutout 11 on the inner sleeve.

The bead 29 acts not only to complete the cutout 11 on the end of the inner sleeve 2 but also functions as a stop by extending below the inner surface of the outer sleeve 1 and is adapted to engage the cross member 18 on the inner sleeve 2 to prevent complete separation of the two sleeves unless additional force is applied.

As pointed out previously, the keeper 9 is provided with four keeper slots 10. This is to enable the device to be operated with the sleeves in any relative position and still have the bolts 21 engage a pair of keeper slots 10. This feature is important where the device is inserted in poor light or visibility and a speedy operation is desired.

Fig. 1 may be modified by omitting the stop 29. Instead of stop portion 29, a slot may be made on opposite sides of the inner sleeve 2 into which will engage a shoulder rivet fastened on two sides of the outer sleeve 1 which would prevent at all times a complete separation of the two units.

Both units may be modified by making them circular rather than square. However, square assembly is preferable for the reason that the device will not roll away from the place when it is deposited when not connected with the wall plug. The device may be made hexagonal or in any other shape which will prevent rolling.

The plug lock may be made of any suitable material such as metal or plastic, plastic preferred as being lower in cost of production. The lock 20 in outer sleeve 1 and the keeper 9 in inner sleeve 2 may be molded into the plastic by any suitable method.

Cutout 11 on the inner sleeve 2 is an opening in which rests the cord running from the electrical unit to the plug end 15. This may be beaded by reinforcement of metal or by the thickness of plastic for the purpose of preventing the cord leading from the electrical unit or the plug end being worn or damaged.

Complete separation of the outer sleeve 1 and inner sleeve 2, as a result of the action of the spring 26 after the lock is released, may be prevented by linking a small chain at any suitable position on the outer sleeve 1 and inner sleeve 2. Said connecting chain may also be used as a means of suspending the unit in any suitable location.

The device may be provided with any suitable means of hanging it up when not in use; such as a loop or eye fastened to the outer sleeve 1.

I claim:

1. A lockable container for an electrical connector, comprising an outer sleeve having means for closing one of its ends, an inner sleeve and a suitable locking means; the sleeves being so adapted as to permit the inner sleeve to be locked in telescoping relationship within the outer sleeve and said inner sleeve being provided with a wall at one end, said wall being provided with a wire receiving cutout, a spring pressed plunger supporting means at the opposite end of said inner sleeve, a spring pressed plunger in said supporting means, said outer sleeve having a closed wall at one end thereof and said plunger being adapted to engage the wall of said outer sleeve when the sleeves are in telescoped position, and a key-hole slot on the opposite side of said last-named wall, said slot forming part of said lock means.

2. A device as defined in claim 1 in which the outer sleeve is provided with an open end and a closed end, said open end receiving said inner sleeve therethrough, said outer sleeve adjacent the open end being provided with a bead so located as to prevent the complete separation of the outer and inner sleeves without the application of additional force by engaging said inner sleeve, said inner sleeve having a bead on one end thereof adjacent said wire receiving cutout, whereby when said inner sleeve is completely inside of said outer sleeve said outer sleeve bead will form with said inner sleeve bead a protective covering around the space formed by said wire receiving cutout.

3. A device as defined in claim 1, said spring pressed plunger comprising a bullet type ejector fastened in said inner sleeve at the end opposite the wall end in such a manner as to force the partial separation of the two sleeves when said sleeves are unlocked.

4. A safety device to prevent unauthorized use of electrical equipment comprising a two section separable housing for an electric plug with locking means to lock the housing in closed position, a first section of said housing formed with three side walls and an end wall, one side and one end of said section being open, an electric wire receiving notch in said end wall with the open end of said notch communicating with said open side of said section, said section being adapted to receive through its open side an electric plug with its attached wire adapted to pass through said notch, a second section of said housing formed with four sides and an end wall, said first section being adapted to slide inside of said second section so as to form a closed housing, said locking means being mounted in the end wall of the second section and in the open end of the first section so as to engage and lock when said housing is closed and spring operated ejecting means for partially ejecting said first section from said second section when said locking means is released.

5. A device of the character described, comprising an outer sleeve, an inner sleeve and a locking means, said outer sleeve being provided with one open end and an end wall closing the opposite end, said inner sleeve being provided with one open end, one open side and a wall closing the opposite end, said locking means comprising a lock mounted in said end wall of the outer sleeve and a keeper mounted in the open end of the inner sleeve, said lock being adapted to engage and lock with said keeper when said inner sleeve is inserted inside of said outer sleeve, said inner sleeve being provided with a cutout portion in the end wall communicating with said

2,643,787

5

open side and being adapted to allow an electric wire to pass therethrough and said inner sleeve being of a size to receive an electric plug inside thereof, said cutout portion being of a size smaller than an electric plug.

BENJAMIN W. ROCKMAN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
390,559	Brooks	Oct. 2, 1888
575,621	Smith et al.	Jan. 19, 1897

Number
1,297,025
1,625,901
2,345,949
2,470,320

5

10

6

Name	Date
Smith	Mar. 11, 1919
Lay	Apr. 26, 1927
Robbins	Apr. 4, 1944
Page	May 17, 1949

FOREIGN PATENTS

Country	Date
Germany	Apr. 14, 1924
Germany	Oct. 10, 1930
France	May 17, 1933