United States Patent [19]

Sander

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[45] **Jan. 15, 1974**

[54] **THEFT DETERRENT FOR OFFICE MACHINES, TELEVISION SETS AND SMALL FACTORY TOOLS**

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[52] **U.S. Cl.** **70/58**

[51] **Int. Cl.**..... **E05b 69/00,** E05b 73/00

[58] **Field of Search**..... 70/58, 57, 163–169, 70/229–232, 258–259; 248/203; 211/4–7, 9

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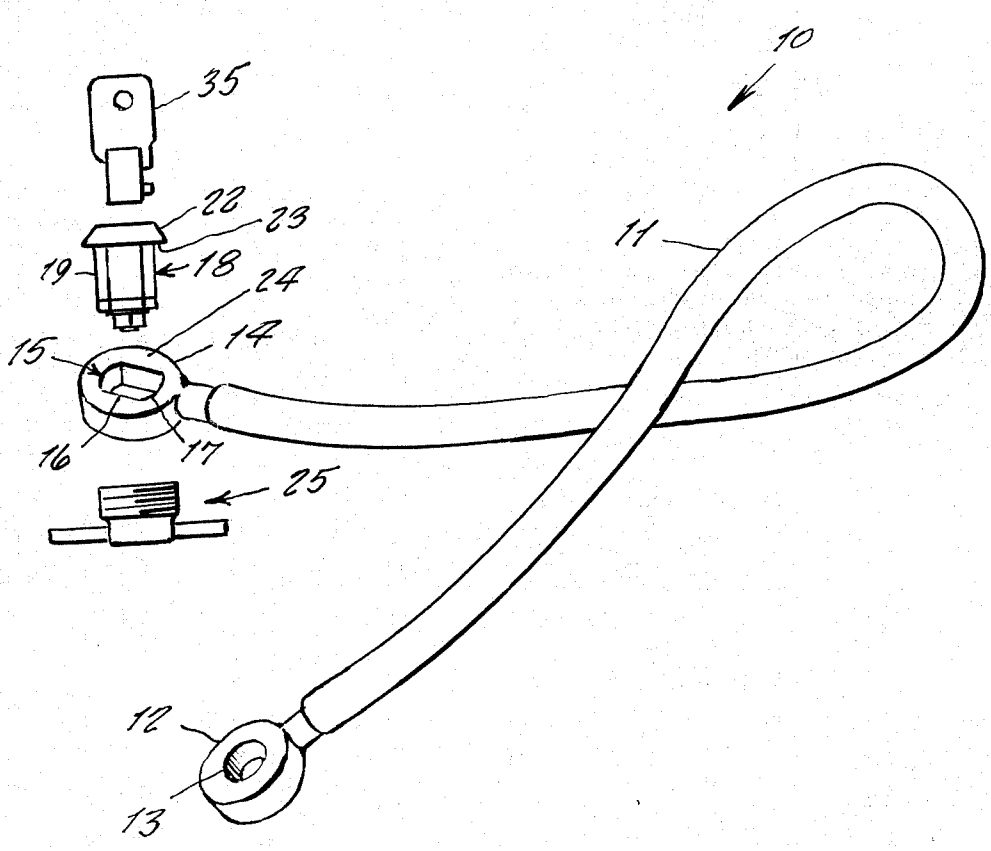
Primary Examiner—Geo. V. Larkin

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[57] **ABSTRACT**

A novel tethering device for securing appliances or other portable equipment of value, to prevent a thief from taking the same, the device consisting of a flexible cable that is resistant to being cut or otherwise severed, and one end of the cable being firmly secured to the object being protected while the other end is fixed to an anchoring stationary object, at least one of the ends including a key operated lock whereby the attachment can be disconnected.

6 Claims, 10 Drawing Figures



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SHEET 1 OF 2

Fig. 1

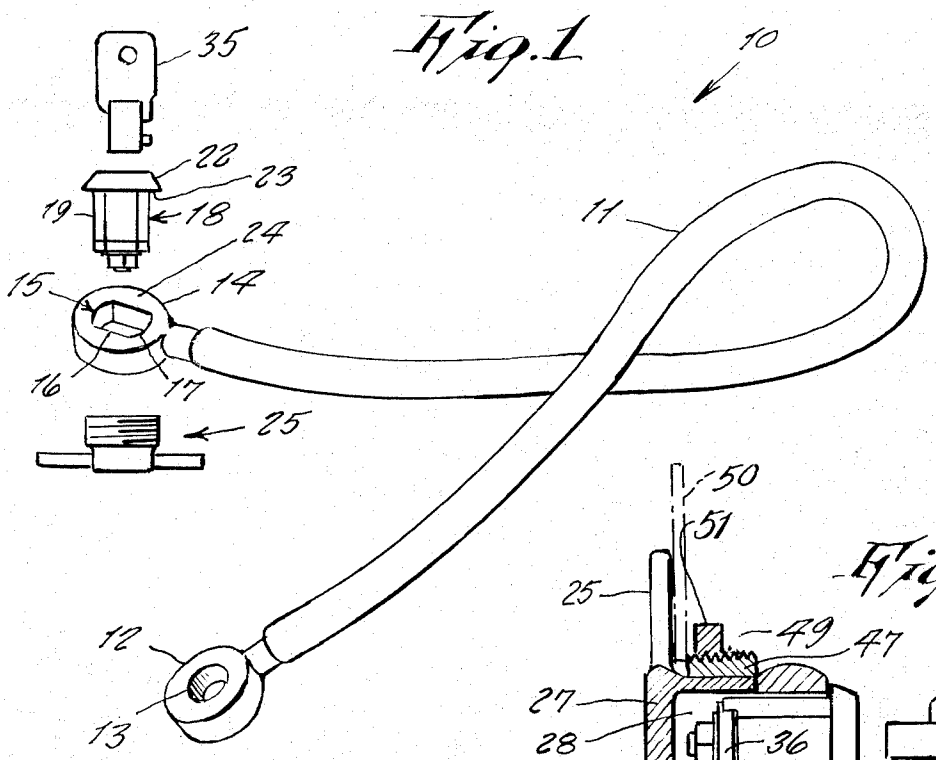


Fig. 2

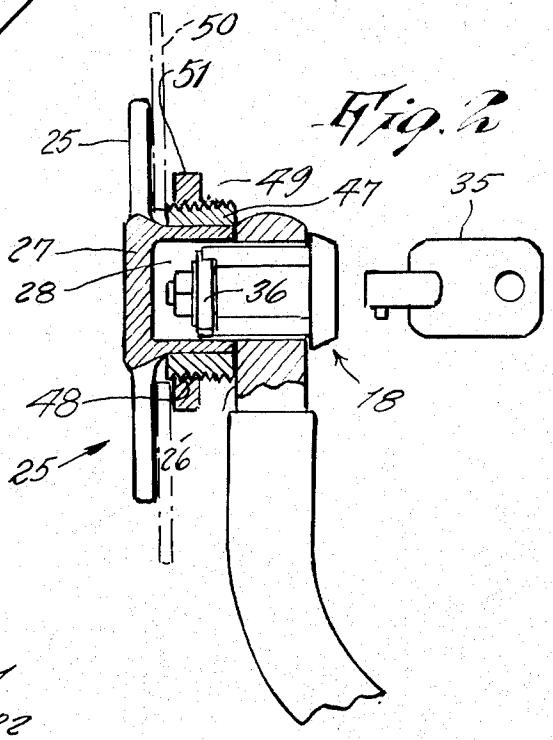


Fig. 3

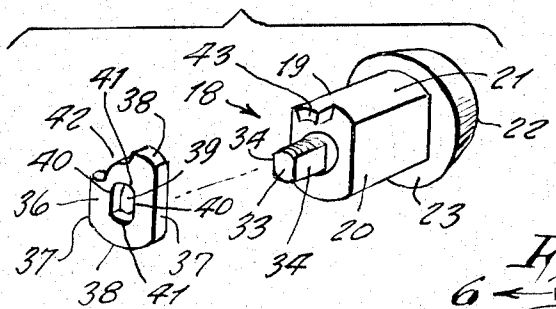


Fig. 4

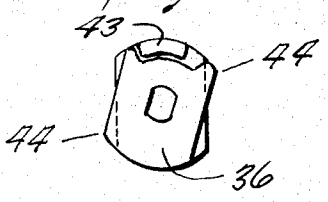


Fig. 5

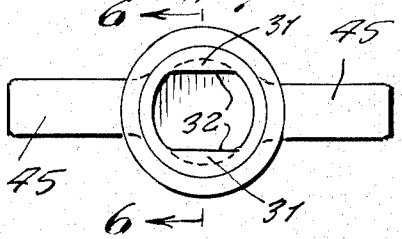
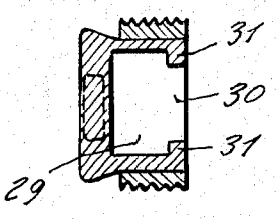


Fig. 6



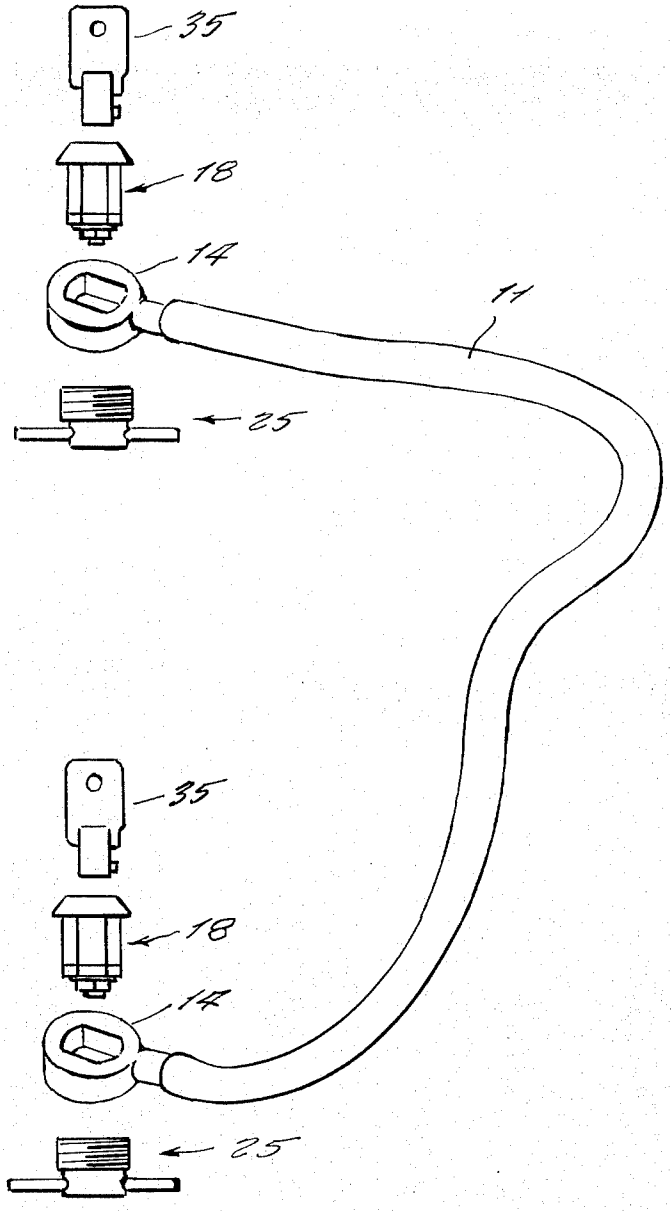


Fig. 7

Fig. 8

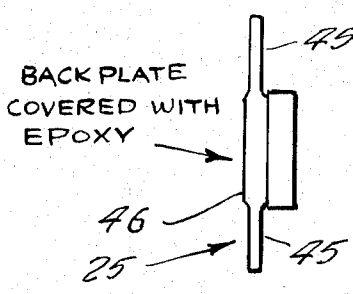


Fig. 9

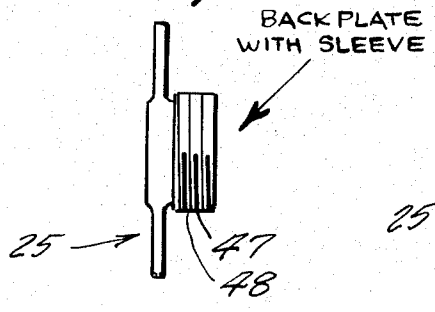
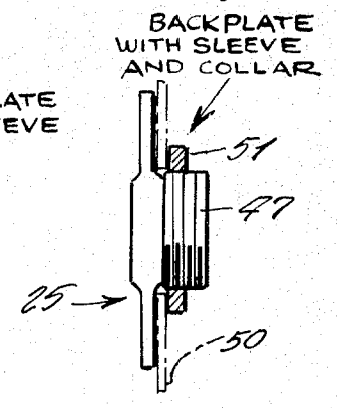


Fig. 10



THEFT DETERRENT FOR OFFICE MACHINES, TELEVISION SETS AND SMALL FACTORY TOOLS

This invention relates generally to tethering devices.

A principle object is to provide a new type of theft deterrent designed to discourage a thief from removing appliances or other portable equipment.

Another object is to provide a theft deterrent that includes a cable which is resistant to being severed, and which at its ends is securely held to a protected item and to an unmovable anchoring object.

Another object is to provide a theft deterrent wherein at least one or both of the cable ends include a key operated lock so that the cable can be untethered by an authorized person having the key.

Still another object is to provide a theft deterrent which accordingly is ideal to secure potable items in a office such as typewriters or calculating machines; or items in a home such as television sets, radios or other appliances; or items in a factory such as tools.

Other objects are to provide a theft deterrent for office machines, television sets and small factory tools which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

Further objects of the invention will appear as the description proceeds.

To the accomplishment of the above and related objects, my invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

FIG. 1 is an exploded view of one form of the invention.

FIG. 2 is a cross sectional view thereof shown assembled.

FIG. 3 is an exploded rear view of a lock forming a component of the present invention.

FIG. 4 is a rear view thereof showing relationship of certain lock parts.

FIG. 5 is a front view of a back plate component.

FIG. 6 is a cross sectional view on line 6—6 of FIG. 5.

FIG. 7 is an exploded view of a modified design of the invention.

FIG. 8 shows the back plate covered with epoxy.

FIG. 9 shows the back plate with a sleeve.

FIG. 10 shows the back plate with a sleeve and collar.

Referring now to the drawings in detail, and more particularly to FIGS. 1 to 6 at this time, the reference numeral 10 represents a thief deterrent according to the present invention wherein there is a flexible cable 11 made of a suitable material such as braided steel wires enclosed either in a sheath of rubber or BX cable sheath and construction so that it resists being severed. At one end of the cable there is firmly secured a cable head 12 made of metal and having a circular opening 13 therethrough for receiving a pin, rivet or bolt that cannot be removed by a prospective thief. At the other end of the cable there is firmly secured a cable head 14 having an elongated opening 15 therethrough which has straight parallel opposite sides 16 and rounded opposite ends 17.

The opening 15 is adaptable to receive a lock 18 that is slidable thereinto, the lock including a base 19 having a cross-sectional outer contour that is the same as

the contour of opening 15 by including straight parallel opposite sides 20 and rounded opposite sides 21, so that the lock cannot be rotated within the opening 15. At one end of the case there is an enlarged head 22 integral with the case, the head having a shoulder 23 that rests against one side 24 of the cable head. The case is of a length so that the opposite end thereof protrudes from the opposite end of the opening 15, so that it can extend into a back plate 25 that can be positioned against the opposite side 26 of the cable head.

The back plate 25 includes a metal cap 27 having an opening 28 on one side thereof. The opening 28 is circular within the bottom portion 29 thereof but the outer portion 30 thereof has a pair of flanges 31 extending across diametrically opposite sides thereof, the flanges being relatively thin and with straight parallel edges 32. Thus the portion 30 has a configuration and a size that is identical to the shape and size of the opening 15 of the cable head, so that the lock protruding end is slidable into the back plate but is not rotatable respective thereto.

The protruding end of the lock has a rotatable threaded shaft 33 extending from the end of the case; the shaft having parallel flats 34 on opposite sides thereof. The shaft is integral with a rotatable barrel of a conventional lock mechanism (not shown) within the case, and which can be rotated when a key 35 is inserted into the opposite end of the lock. Upon this shaft 33 a cam plate 36 is mounted.

The cam plate 36 comprises a steel flat member having a same size and contour as the lock case, so that it includes straight, parallel opposite side edges 37 and opposite rounded edges 38 which align flash flush with sides 20 and 21 respectively of the lock case 19 when the cam plate is rotated into an unlocked position respective to the case 19. A central elongated opening 39 in the cam plate has straight parallel opposite sides 40 and rounded opposite edges 41 to snugly fit on shaft 33 and rotate together therewith the shaft 33 having a same cross-sectional contour and size as the contour of the opening.

One of the rounded edges 41 has a notch 42 therein to clear a rearward extending stop 43 integral with the back end of the lock case. The notch 42 is of an arcuate length greater then the stop so that the cam plate can rotate a short distance before the stop abuts with the opposite ends of the notch. Thus the cam plate can be rotated between a position wherein it aligns with the contour of the case to allow passage through the cable head opening 15 and portion 30 of the back plate, and a position wherein it is disaligned with the case, as shown in FIG. 4 so that corners 44 of the cam plate 36 become locked behind the flanges 31 thus securing the lock, cable head and back plate together.

The back plate cap is integral with a pair of handles 45 at its rear and which extend on diametrically opposite sides.

In operative use, in order to secure the device to an object that is intended to be protected from theft, the back plate 25 is threadedly engaged into one side of the object. The cam plate 36 is then rotated by means of key 35 so the cam plate contour is aligned with the contour of the body of the lock case 19, thus allowing the cam plate and lock to be inserted into the opening 15 of the cable head 14, until the lock enlarged head 22 abuts against the side of the cable head.

The cam plate and the end of the lock protrude through the opening **15** and are then positioned on the opposite side of the object to be secured, and the cam plate and the end of the lock are inserted into the opening **28** of the back plate **25,** and pushed inwardly until the cable head abuts with the back plate. The lock is now fully introduced.

The key **35** is then turned, thus causing the shaft **33** to rotate within the lock by a conventional lock mechanism and thus cause the cam plate **36** mounted on shaft **33** to rotate respective to the lock so to assume the position shown in FIG. **4** wherein the cam plate corners **44** become displaced behind the flanges **31** of the back plate. The key is then removed, leaving the device locked.

Reference is now made to FIG. **7** which is identical to the construction shown in FIG. **1,** except that the lock assembly, above described, is here provided at each opposite end of the cable. Thus the cable assembly is detachable from both the object being secured and the anchoring object.

Reference is now made to FIGS. **8** to **10** showing various elements incorporated on the back plate. FIG. **8** shows the back plate coated with an epoxy cover **46.** FIG. **9** shows a sleeve **47** made of plastic material fitted around the back plate; the sleeve having an external thread **48** for fitting in a threaded opening **49** of an appliance of other item **50** protected from thieves. As shown in FIG. **2,** the rear portion of the back plate cap **27** is diametrically conically enlarged to prevent the cap from being pulled out forwardly through the sleeve. In FIG. **10** a threaded collar **51** is engaged on the threaded sleeve.

Thus there is provided a theft deterrent to prevent portable items from being carried away.

While certain novel features of my invention have been shown and described and are pointed out in the annexed claims, it will be understood that various omissions, substitutions, and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing from the spirit of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a theft deterrent, the combination of a flexible cable made of material that is resistant to being severed, means at one end of said cable for securement to a stationary anchoring object and means at the other end of said cable for securement to a portable object intended to be prevented from being carried away by an unauthorized person, wherein said portable object may comprise office equipment such as a typewriter or calculating machine, in the home may comprise a radio, television set, or other appliance, and in a factory may comprise a small tool, said means for securement to a portable object comprising, a lock engageable with at least one end of said cable to permit an authorized person to disconnect said cable from one of said objects, a cable head secured to said cable end, a key operated lock receivable through said cable head, a back plate securable to one of said objects, and said lock being securable to said back plate, wherein said cable head has a transversely elongated opening therethrough, and said lock includes a case transversely correspondingly configurated to permit slidable insertion of said lock in said opening but prevent rotation respective thereto.

2. The combination as set forth in claim **1,** wherein said back plate has an opening on one side thereof, said opening being circular in shape except at its outer end where a pair of spaced apart flanges extend across the entrance of said opening to form shoulders therebehind.

3. The combination as set forth in claim **2,** wherein said back plate includes a threaded sleeve securable in a threaded opening of said portable object, said sleeve being fitted with a rotatable threaded collar that serves as a lock nut for securement of said back plate to said portable object.

4. The combination as set forth in claim **3,** wherein a rear end of said lock includes a pivotable cam plate, said cam plate being rotatable in response to a key inserted in a front side of said lock, so that corners of said cam plate become positioned behind said flanges extending over said back plate opening thus securing said lock, cable head and back plate together.

5. The combination as set forth in claim **4,** wherein said lock case has an enlarged head on a front end thereof that abuts against one side of said cable head while said back plate abuts against the other side of said cable head.

6. The combination set forth in claim **5,** wherein another like said lock is engageable with the other said end of said flexible cable.

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