United States Patent [19]

Greenebaum

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[54] **SHOWCASE SECURITY SYSTEM**

[75] Inventor: **Howard M. Greenebaum**, Pasadena, Md.

[73] Assignee: **Chain-Lock Co., Inc.**, Baltimore, Md.

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[52] **U.S. Cl.** **70/100;** 70/457

[51] **Int. Cl.**[2] **F05B 65/00**

[58] **Field of Search** ..... 70/77, 78, 81, 85, 86, 70/90, 95, 99, 100, 120, 134, 265, 389, 457, DIG. 19; 292/DIG. 46

[56] **References Cited**

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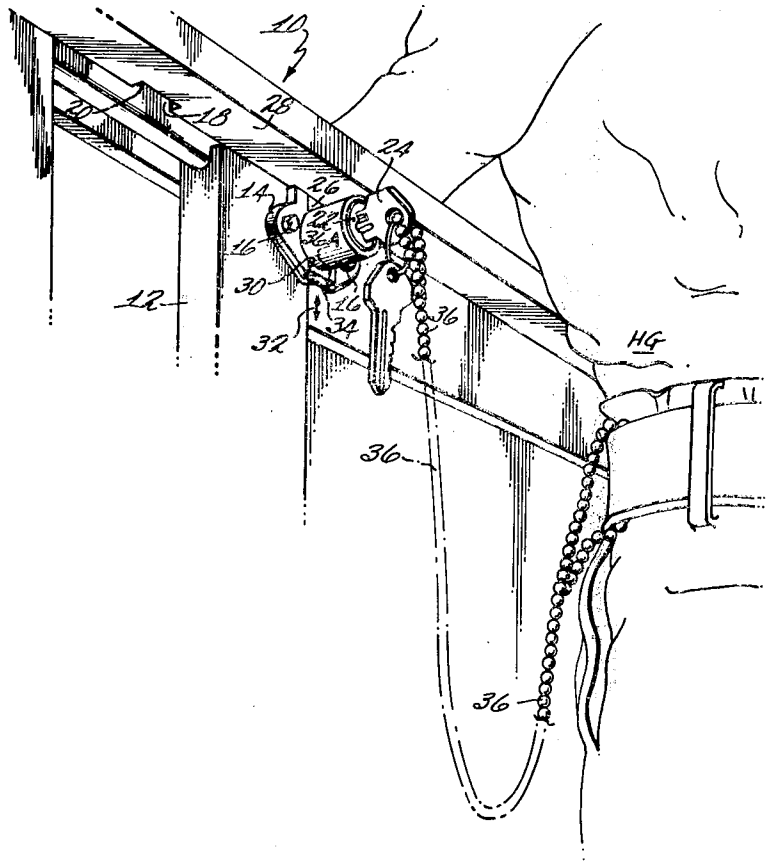
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Primary Examiner—Paul R. Gilliam
Assistant Examiner—Victor N. Sakran
Attorney, Agent, or Firm—Cushman, Darby & Cushman

[57] **ABSTRACT**

The showcase is provided with a lock set that includes a key operated bolt which can be thrown only when the showcase door is closed. Accordingly, the key can be removed only when the case is locked. In counterpart, the authorized users are provided with keys secured on their persons, so no one can absent-mindedly or neglectfully walk off leaving the showcase unlocked.

2 Claims, 2 Drawing Figures



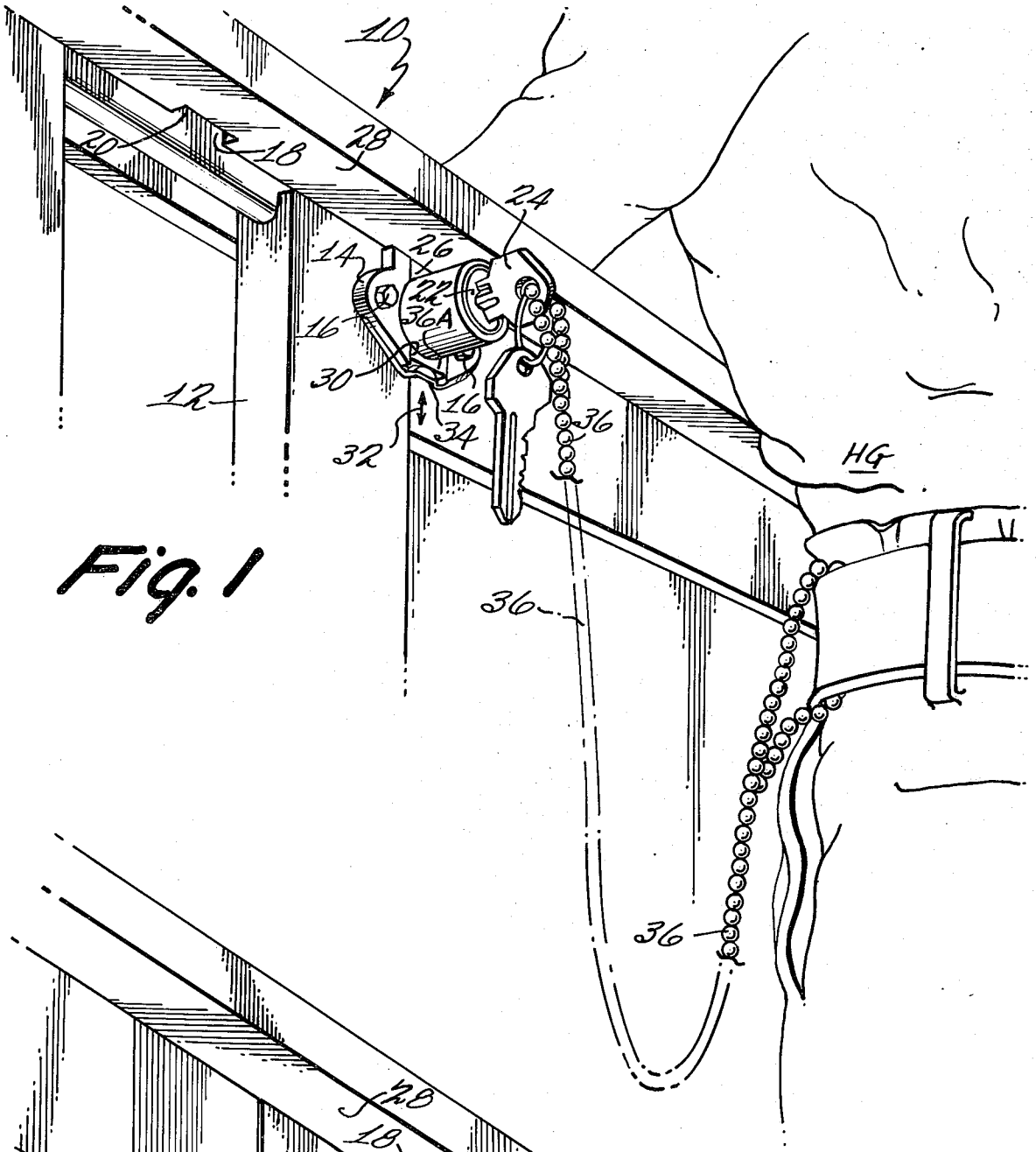

10
20
18
28
24
26
14
22
36A
16
30
12
16
34
32
36
HG
36

Fig. 1

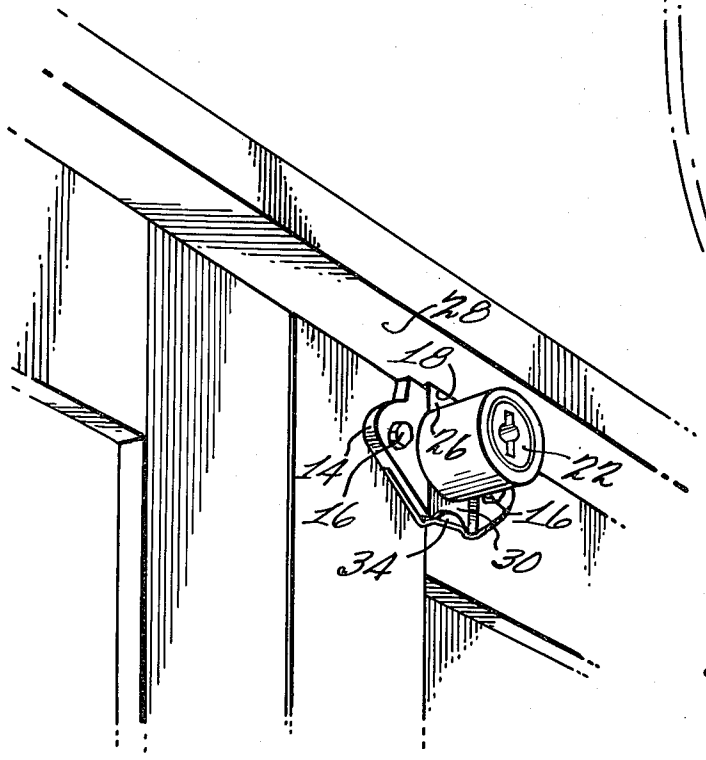

28
18
26
22
14
16
16
34
30

Fig. 2

SHOWCASE SECURITY SYSTEM

BACKGROUND OF THE INVENTION

Jewelers, watch repairers, and other sellers of small valuable objects try to keep them under lock and key to prevent pilferage. Thus, display cases are often provided with locks and the authorized users, the store owners and certain employees are given keys thereto. However, it is easy to become so engrossed with trying to make a sale or in keeping track of others waiting to be served, that a case door opened to show an item inquired about is unintentionally left ajar or slid closed but left unlocked. When a discovery of the failure to relock the case is made, often nothing has been lost but the shopkeeper's peace of mind. But the risk is there and sometimes thieves will take advantage of the situation.

SUMMARY OF THE INVENTION

The showcase is provided with a lock set that includes a key operated bolt which can be thrown only when the showcase door is closed. Accordingly, the key can be removed only when the case is locked. In counterpart, the authorized users are provided with keys secured on their persons, so no one can absent-mindedly or neglectfully walk off leaving the showcase unlocked.

The principles of the invention will be further hereinafter discussed with reference to the drawing wherein a preferred embodiment is shown. The specifics illustrated in the drawing are intended to exemplify, rather than limit, aspects of the invention as defined in the claims.

BRIEF DESCRIPTION OF THE DRAWING

In the Drawing

FIG. **1** is a perspective view of part of a typical sliding door showcase with the lock of the invention in an open condition, showing the key inserted therein and secured about the authorized user; and

FIG. **2** is a perspective view of the case shown closed and locked.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENT

The showcase **10** is provided with a sliding door **12.** A lock housing **14** is secured on the door **12,** e.g. with bolts **16.** At a comparable position, for when the door **12** is slid fully closed, a catch **18** is provided on the case **10.** According to the circumstances, the catch **18** may be a piece of hardware secured on the case, or a socket **20** cut in the case itself. The lock housing **14** is provided with a pin tumbler cylinder **22** which can be turned by a key **24** to thrust and retract a bar bolt **26.** At all sites along the case rail **22** on which the catch **18** is provided, but for the site of the catch **18,** the surface **28** is too close to the lock housing **14** to permit the bar bolt **26** to be thrust. Accordingly, the key **24** can only be turned to thrust the bar bolt when the door **12** is fully closed (in which condition the bar bolt **26** is aligned with the socket **20**).

Within the housing **14** a lateral slot **30** slidably receives the bar bolt **26.** The pin tumbler cylinder is keyed to the bar bolt **26** rack and gear fashion, so that as the key **24** rotates the pin tumbler mechanism, the bar bolt slides in the direction of the arrow **32.** A stop **34** is provided at the opposite end of the slot **30** from the one from which the bar bolt is thrust when locking.

The stop is so positioned that when the bar bolt **26** is retracted, its opposite end **36**A from that which does the locking hits the stop **34** at a point in the cycle of the rotation of the pin tumbler mechanism that leaves the key **24** at a non-withdrawable position. (Persons familiar with automobile ignition locks will recognize a similar construction used in such circumstances, which permits the key to be freely withdrawn when the ignition is "off" but, which otherwise prevents withdrawal of the key.)

It should further be noticed that the authorized user HG who bears the key **24** has it securely attached to his person near his waist by a chain **36** which is long enough to permit him to insert the key in the lock, but insufficient to permit him to leave the case unattended while the key is in the lock. A chain **36** measuring about eighteen inches from belt to key is typically appropriate.

Accordingly, the case can only be unlocked while a user is stationed in attendance thereto. It cannot be locked open, because the bar bolt would hit the surface **28** and the key cannot be withdrawn unless the case is locked. Thus a problem long a bane of jewelers and other shopkeepers is solved by use of the invention.

It should now be apparent that the showcase security system as described hereinabove possesses each of the attributes set forth in the specification under the heading "Summary of the Invention" hereinbefore. Because the showcase security system of the invention can be modified to some extent without departing from the principles of the invention as they have been outlined and explained in this specification, the present invention should be understood as encompassing all such modifications as are within the spirit and scope of the following claims.

In the claims:

1. For a showcase including a case portion having a door slides open and closed, a showcase security system, comprising:

a lock housing mounted on said door adjacent one side edge thereof;

a bar bolt slidably mounted on said housing for sliding toward and away from the case portion;

a key operable tumbler cylinder coupled to the bar bolt for thrusting and retracting the bar bolt toward and away from the case portion;

key means removably insertable into the tumbler cylinder for operating the tumbler cylinder;

the tumbler cylinder permitting removal of the key when the key is in a predetermined angular alignment with the lock housing corresponding to the bar bolt being in a thrust condition;

a bolt catch provided on the case portion, where it is in alignment with the bar bolt only when the door is slid fully shut;

boss means on said housing and positioned to be engaged by the bar bolt, upon retraction thereof, upon rotation of the key in a sense to retract the bar bolt, by less than an angular amount such as will again bring the key to said predetermined angular alignment, whereby the key is prevented from being withdrawn unless the door is closed and the showcase is locked.

2. The showcase security system of claim **1** further including a chain about **18** inches long having means at one end for attachment to an authorized user of the showcase and having said key mounted at the other end thereof.

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