United States Patent [19]

Buettner

[11] **3,836,187**

[45] **Sept. 17, 1974**

[54] **TWO-DOOR LOCK DEVICE**

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[22] Filed: **May 24, 1973**

[21] Appl. No.: **363,584**

[52] **U.S. Cl.** **292/262,** 292/264, 232/43.4, 49/67

[51] **Int. Cl.** **E05c 17/04**

[58] **Field of Search** 292/262, 346, 264, 288, 292/289; 49/394, 63, 67, 61; 312/291, 292, 324; 232/43.4; 52/201; 248/465

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Assistant Examiner—Peter A. Aschenbrenner
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[57] **ABSTRACT**

A two-door lock device for locking a building inner door that swings inward to a building outer door that swings outward, to lock the doors against unauthorized opening of the doors of the building from the outside. The lock device includes an elongated wire cable having the outer end attached to the inner side of the outer door, and the inner end thereof passed over one edge of the inner door and secured interior of the inner door.

9 Claims, 8 Drawing Figures

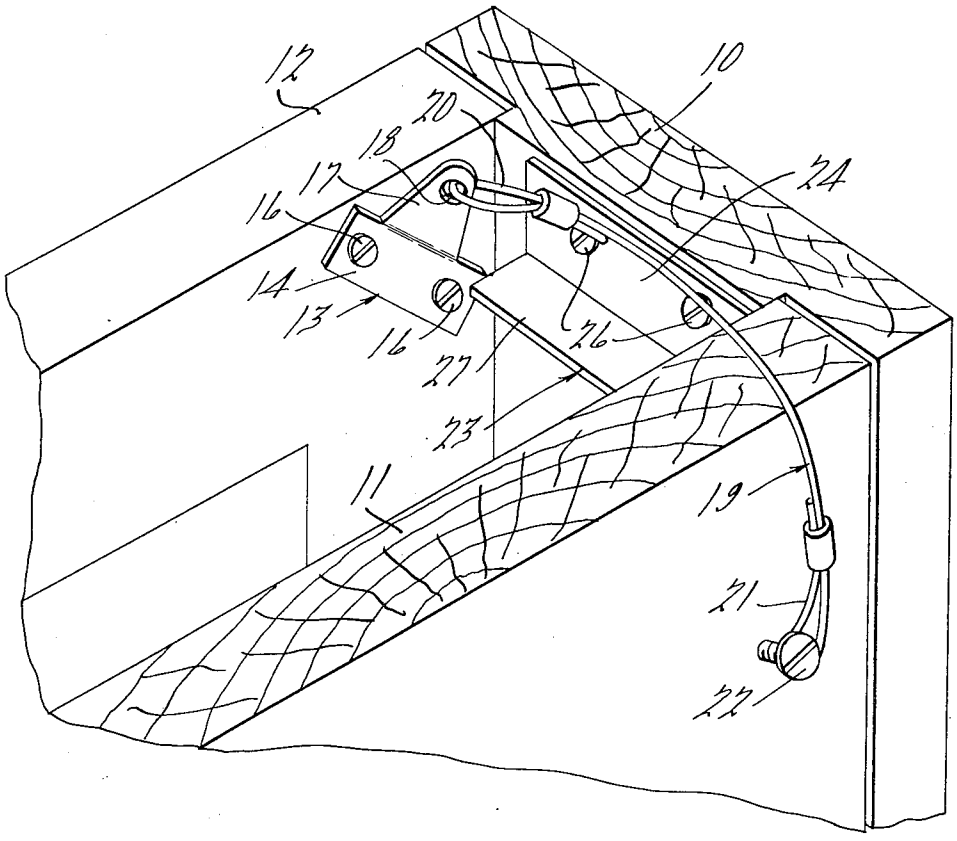
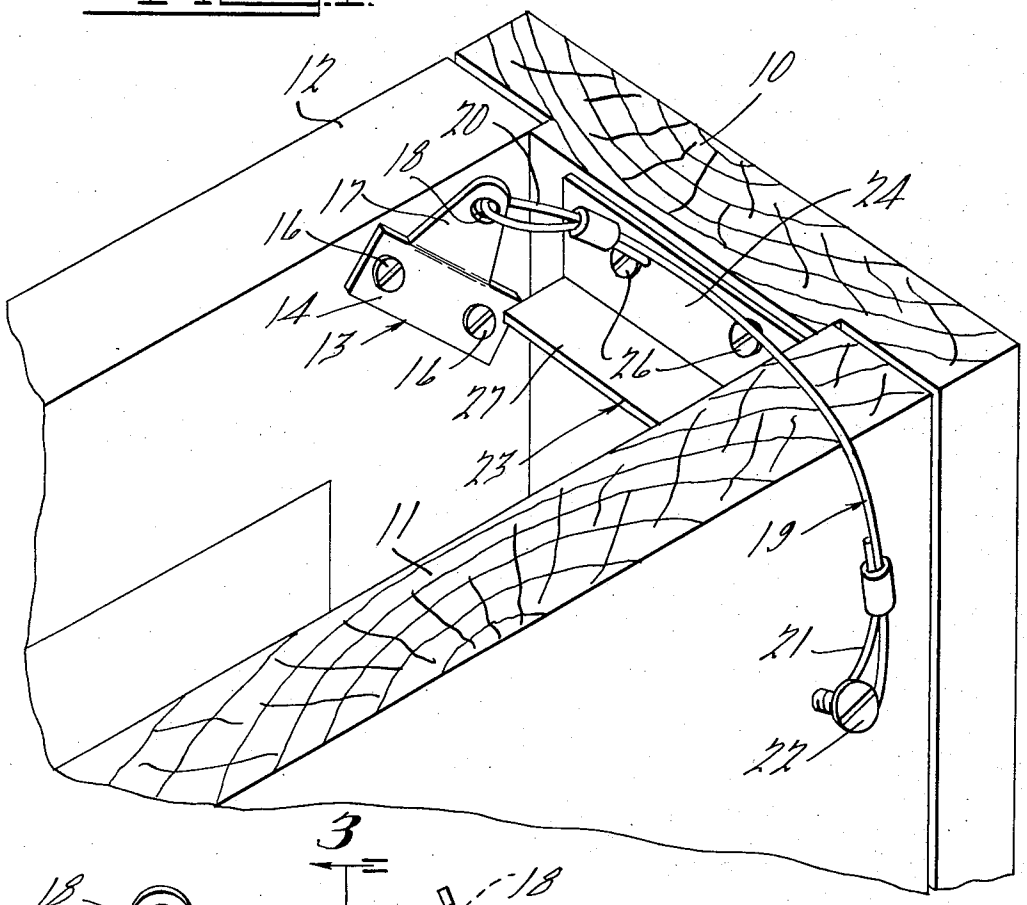


FIG. 1.



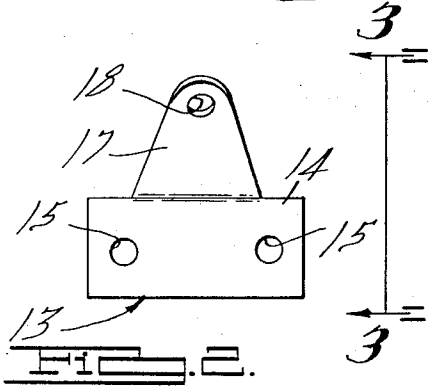


FIG. 2.

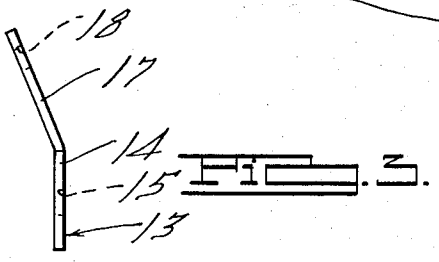


FIG. 3.

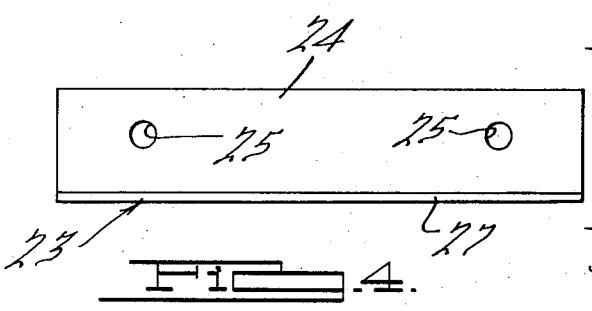


FIG. 4.

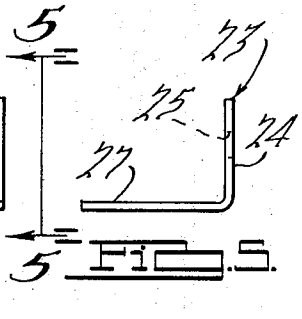


FIG. 5.

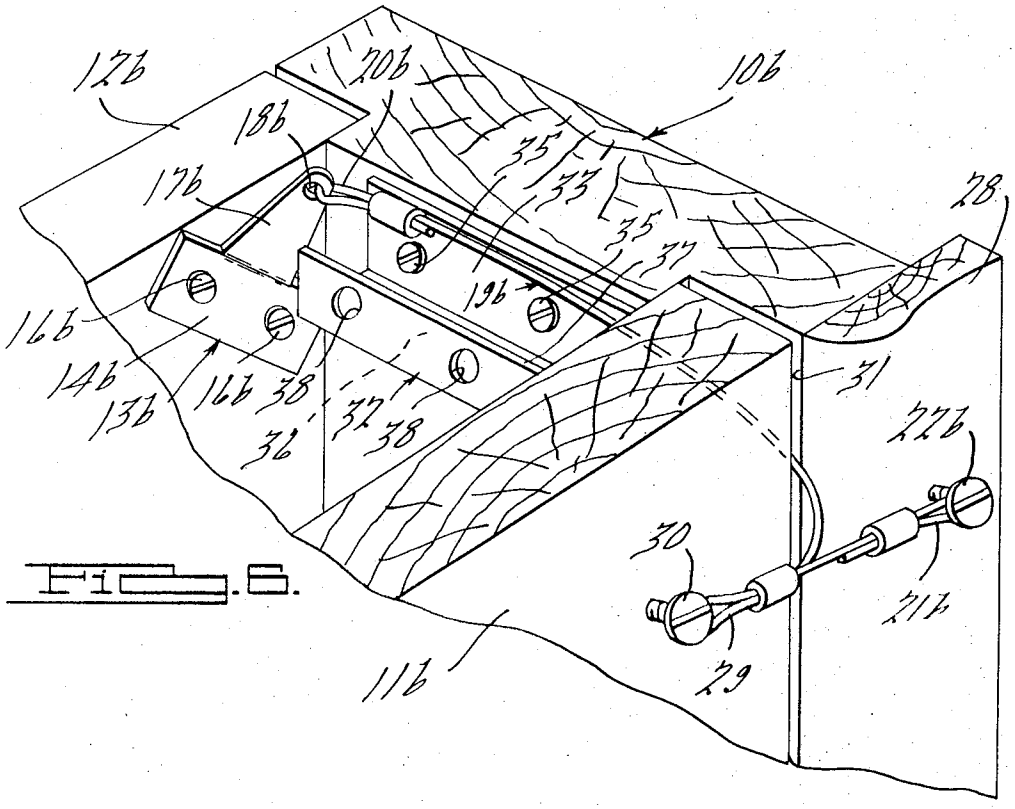


FIG. 6.

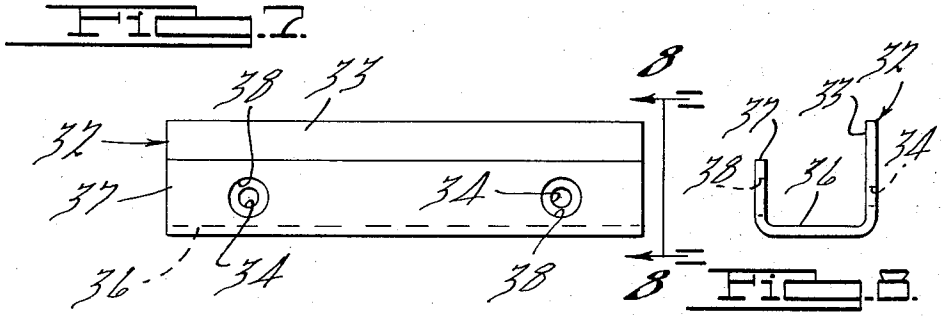


FIG. 7.

FIG. 8.

TWO-DOOR LOCK DEVICE

SUMMARY OF THE INVENTION

This invention relates generally to the lock art, and more particularly, to a lock device for locking two oppositely swingable building doors together to prevent unauthorized entry from the exterior of the building. It is the primary object of the present invention to provide a simple and economical two-door lock which cannot be picked or jimmied from the outside of a building. The lock of the present invention can only be locked and unlocked from the inside of the building.

It is another object of the present invention to provide a novel and improved lock for a building which may also be used to keep small children inside of the building.

It is still another object of the present invention to provide a novel and improved two-door lock device for locking a building inner door that swings inward to a building outer door that swings outward, to lock the doors against unauthorized opening of the doors from the outside of the building, comprising, an elongated flexible member having an outer attachment means on the outer end thereof, and an inner attachment means on the inner end thereof, a first retainer means operatively mounted on the inside of said outer door and being operatively attached to the outer attachment means on said elongated flexible member, a second retainer means operatively mounted interior of said inner door and being operatively attached to the inner attachment means on said elongated flexible member, and said elongated flexible member is positioned to pass over one edge of the inner door, whereby the inner and outer doors are locked together, the neither of said doors can be opened from the outer sides thereof, thereby preventing unauthorized entry.

It is still a further object of the present invention to provide a novel and improved two-door lock device which includes an elongated wire cable having the outer end attached to the inner side of an outer door that swings outwardly, and the inner end thereof passed over one edge of an inner door and secured to the inner side of the inner door, or secured both to the inner side of the inner door and to a fixed member, as to a fixed door jamb.

Other objects, features and advantages of this invention will be apparent from the following detailed description, appended claims, and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a fragmentary, perspective view of two doors in a building which swing open in opposite directions and which are illustrated as being provided with a lock device made in accordance with the principles of the present invention.

FIG. **2** is a front, elevational view of a retainer bracket employed in the lock device structure illustrated in FIG. **1.**

FIG. **3** is a right side elevational view of the retainer bracket structure illustrated in FIG. **2,** taken along the line **3—3** thereof, and looking in the direction of the arrows.

FIG. **4** is a front elevational view of an L-shaped guard member employed in the lock device structure illustrated in FIG. **1.**

FIG. **5** is a right side elevational view of the guard member structure illustrated in FIG. **4,** taken along the line **5—5** thereof, and looking in the direction of the arrows.

FIG. **6** is a fragmentary, perspective view of two doors in a building provided with a lock device illustrating a second embodiment of the invention.

FIG. **7** is a front elevational view of channel-shaped guard member employed in the locking device structure of FIG. **6.**

FIG. **8** is a right side elevational view of the channel-shaped guard member structure illustrated in FIG. **7,** taken along the line **8—8** thereof, and looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings and in particular to FIG. **1,** the numeral **10** represents a building vertical door jamb on which is hingedly mounted an inner door **11** and an outer door **12.** The inner door **11** is hingedly mounted for movement inwardly of the building in which the doors are mounted; that is, the inner door **11** would swing counterclockwise, as viewed in FIG. **1,** on suitable hinge means mounted on the jamb **10.** The outer door **12** would comprise a door such as a storm or screen door, and it would swing outwardly; that is, clockwise, as viewed in FIG. **1,** on suitable hinge means mounted on the jamb **10.**

The two-door lock means of the present invention includes a first retainer means as a retainer bracket, generally indicated by the numeral **13,** which is operatively mounted on the inside of the outer door **12,** at a position adjacent the upper end thereof and adjacent the jamb **10** on which the door **12** is hinged. The retainer bracket **13** includes a base plate portion **14** which is provided with a pair of screw holes **15** as illustrated in FIG. **2.** The retainer bracket base plate portion **14** is fixedly secured to the inside surface of the door **12** by any suitable means, as by a pair of screws **16** which are extended through the holes **15.**

As shown in FIG. **1,** the retainer bracket **13** includes an integral, upwardly and inwardly extended attachment arm portion **17** which is provided with a cable attachment hole **18** on the outer end thereof.

The two-door lock means includes an elongated flexible member, as a wire cable, indicated by the numeral **19,** which may be made from a suitable material as, for exmaple, steel or aluminum. The wire cable **19** may be made to any suitable length, but in most cases it will be approximately 12 inches long. The wire cable **19** is provided on the outer end thereof with an outer attachment means as a suitable loop **20** that is mounted through the hole **18** on the retainer bracket attachment arm **17.** The wire cable **19** is provided with with an inner attachment means as a second loop **21** on the inner end thereof which is adapted to be mounted around a second retainer means as a suitable screw **22** fixedly mounted in the inner surface of the door **11.**

The wire cable **19** may be of any suitable diameter, as a ⅛ inch diameter, and it may be coated with a suitable plastic material or the like. The attachment screw **22** is mounted near the upper right-hand corner of the door **11,** as viewed from the inside of the door **11,** with the wire cable **19** being disposed over the top of the door **11.**

An L-shaped guard member **23** is mounted on the inner face of the door jamb **10** adjacent the upper end thereof, and under the wire cable **19** to prevent cutting of the same. The guard member **23** includes a vertical flange portion **24** which is provided with suitable screw holes **25** (FIG. **4**). As shown in FIG. **1**, the guard member **23** is secured by suitable screws **26** to the door jamb **10**. The guard member **23** includes an integral, horizontal flange **27**.

In use, the wire cable **19** can be quickly and easily pulled over the top of the inside door **11**, as the inside door is closed. The inner loop **21** is then mounted over the screw **22** on the inside of the door **11**. The lock of the present invention cannot be picked or jimmied from the outside of a building. It can be locked or unlocked only from the inside of the door **11**. It will be understood, that this lock cannot be activated when no person is in the house, but only when someone is in the house to engage the inner loop **21** with the screw **22**. The lock is primarily useful for preventing unauthorized entry into a house, but it also serves as a useful means for keeping small children inside a home; that is, where a small child could not reach up to remove the cable inner loop **21** from the screw **22**.

FIGS. **6, 7** and **8** illustrate a second embodiment of the invention, and the parts thereof that correspond to parts of the first embodiment of FIGS. **1** through **5** have been marked with the same reference numerals followed by the small letter *b*. The embodiment of FIGS. **6, 7** and **8** includes an intermediate attachment means or loop **29** formed in the wire cable **19***b*, at a point adjacent the inner end thereof, but spaced apart from the loop **21***b*. The inner end of loop **21***b* is illustrated in FIG. **6** as being mounted over the retainer screw **22***b* that is secured to a door trim strip or molding **28**. The molding **28** is a conventional molding which would be mounted on the inner face of the door jamb **10***b*. The intermediate wire cable loop **29** is mounted over a retainer screw **30** which is secured to the inner face of the door **11***b* at a point spaced apart from the retainer screw **22***b*, but horizontally aligned therewith. The wire cable **19***b* is shown as passing behind the inner door **11***b*, through the space **31** between the rear edge of the door **11**b and the door jamb **10***b*.

A modified guard member **32** is employed in the structure of FIG. **6**. As best seen in FIGS. **7** and **8**, the guard member **32** is U-shaped in cross section and includes an inner, vertical flange **33** which is provided with a pair of screw holes **34** for mounting the guard member **32** by means of a pair of screws **35** on the inner side of the door jamb **10***b*. The guard member **32** further includes the integral, horizontal flange **36** and outer vertical flange **37**. The outer vertical flange **37** is provided with a pair of holes **38** which are aligned with the holes **34** and which are larger to permit the passage of a screw driver therethrough for mounting the screw **35** through the holes **34**.

The embodiment of FIGS. **6, 7** and **8** functions in the same manner as the previously described embodiment. The wire cable **19***b* is adapted to pass through the U-shaped guard member **32** to prevent cutting of the wire cable **19***b* by a person breaking through the window or screen in the outside door **12***b*, if it is a storm or screen door, respectively. The provision of two loops on the inner end of the wire cable **19***b* provides for additional retention strength on the inner end of the wire cable **19***b*.

While it will be apparent that the preferred embodiments of the invention herein disclosed are well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation and change.

What is claimed is:

1. A two-door lock device for locking a building inner door that swings inward to a building outer door that swings outward, to lock the doors against unauthorized opening of the doors from the outside of the building, comprising:

a. an elongated flexible member having an outer attachment means on the outer end thereof, and an inner attachment means on the inner end thereof;

b. a first retainer means operatively mounted on the inside of said outer door and being operatively attached to the outer attachment means on said elongated flexible member;

c. a second retainer means operatively mounted interior of said inner door and being operatively attached to the inner attachment means on said elongated flexible member; and,

d. said elongated flexible member is positioned to pass over one edge of the inner door, whereby the inner and outer doors are locked together, and neither of said doors can be opened from the outer sides thereof, thereby preventing unauthorized entry.

2. A two-door lock device as defined in claim **1**, wherein:

a. said cable is passed over the upper edge of the inner door.

3. A two-door lock device as defined in claim **1**, wherein:

a. said cable is passed over a side edge of the inner door.

4. A two-door lock device as defined in claim **1**, wherein:

a. said first retainer means comprises a retainer bracket, and said elongated flexible member comprises a wire cable and said outer attachment means comprises a loop formed on the outer end of the wire cable and secured to the retainer bracket.

5. A two-door lock device as defined in claim **1**, including:

a. a third retainer means operatively mounted interior of said inner door; and,

b. an intermediate attachment means on the elongated flexible member operatively attached to said third retainer means.

6. A two-door lock device as defined in claim **1**, including:

a. a guard member mounted on the door jamb, under the elongated flexible member, between the inner and outer doors.

7. A two-door lock device as defined in claim **6**, wherein said guard member comprises:

a. an elongated L-shaped guard member.

8. A two-door lock device as defined in claim **6**, wherein said guard member comprises:

a. an elongated U-shaped guard member.

9. A two-door lock device as defined in claim **5**, wherein:

a. said second retainer means is mounted on a stationary portion of the building in which said doors are mounted, and said third retainer means is operatively mounted on the inner side of said inner door.

* * * * *

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,836,187 Dated September 17, 1974

Inventor(s) Larry H. Buettner

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 1, line 35, "the" should be -- and --.

Signed and sealed this 3rd day of December 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

FORM PO-1050 (10-69)

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* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334