

[54] **SELF-CONTAINED ALARM LOCK
WITH TAMPER-PROOF
INTERLOCKED CASING FORMED
FROM EXTRUSION**

[72] Inventor: **Stanley William Frank**, 24 Clinton
Street, Brooklyn, N.Y. 11201

[22] Filed: **Aug. 18, 1970**

[21] Appl. No.: **64,715**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 676,804, Oct.
20, 1967, abandoned.

[52] U.S. Cl. **340/274, 200/61.64, 335/205**

[51] Int. Cl. **G08b 13/08**

[58] Field of Search..... **340/274, 276**

[56] **References Cited**

UNITED STATES PATENTS

3,353,383 11/1967 Fish..... **340/274 X**

3,444,546	5/1969	Hawkins.....	340/274
2,615,083	10/1952	Krueger.....	340/274 X
3,011,163	11/1961	Britt.....	340/274
3,537,094	10/1970	Hawkins et al.....	340/274
2,660,632	11/1953	Makishima.....	340/274 X

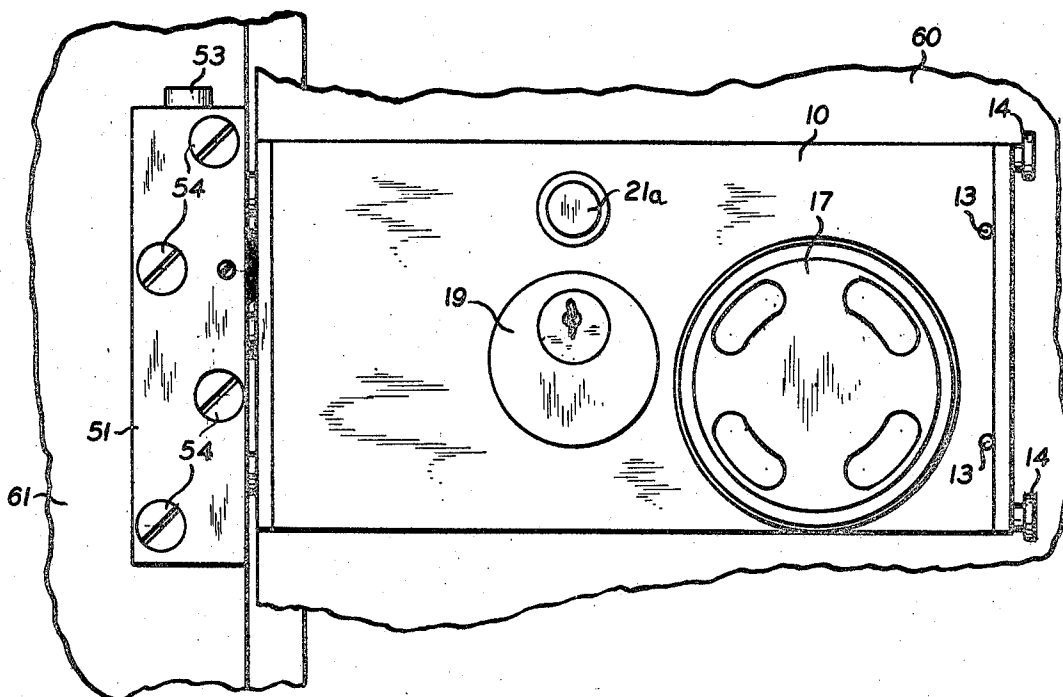
Primary Examiner—David L. Trafton

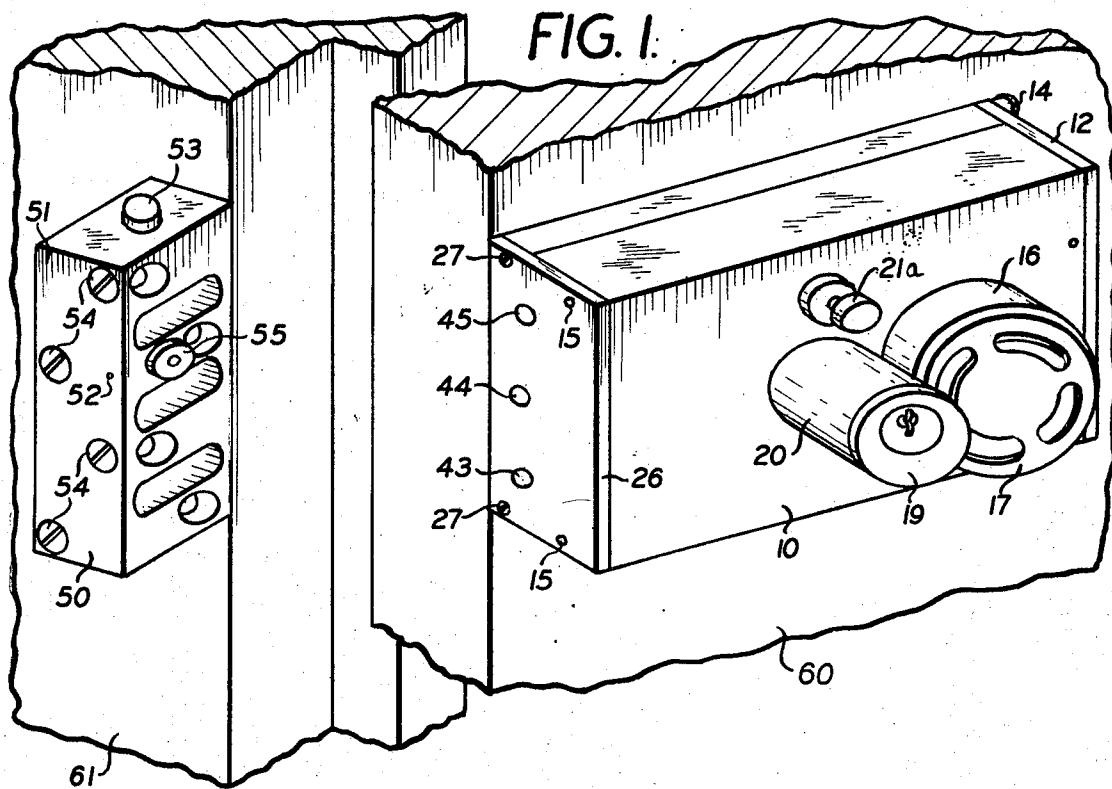
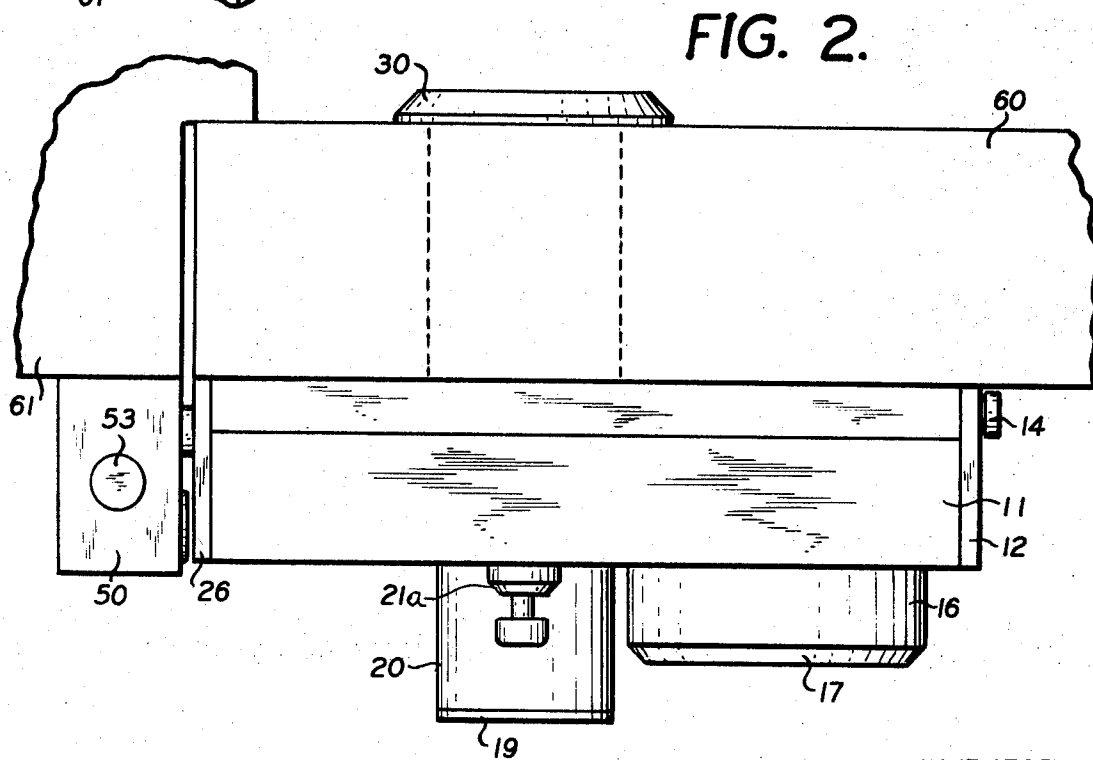
Attorney—Burgess, Dinklage & Sprung

[57] **ABSTRACT**

An integral self-contained, key-operated alarm lock, the major portion of the casing for which can be made from two longitudinally slidably tongued-groove interlocking channel extrusions, has an electronic alarm circuit composed of a finger on-off switch, a striker proximity switch, a bolt position switch and a latching switch which holds the alarm on when it has been activated, until properly shut off.

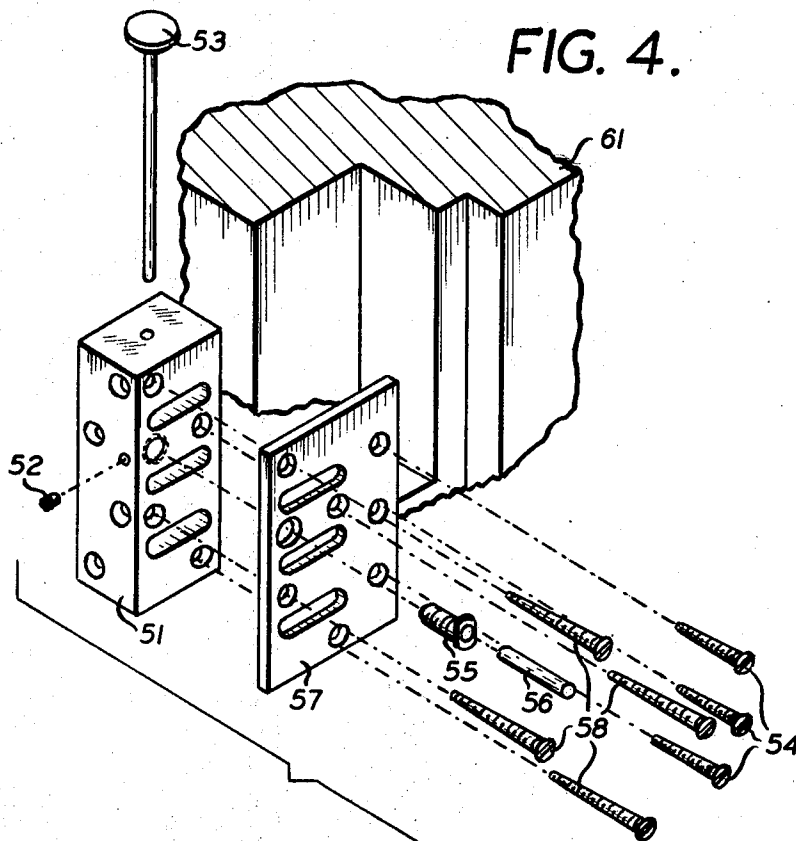
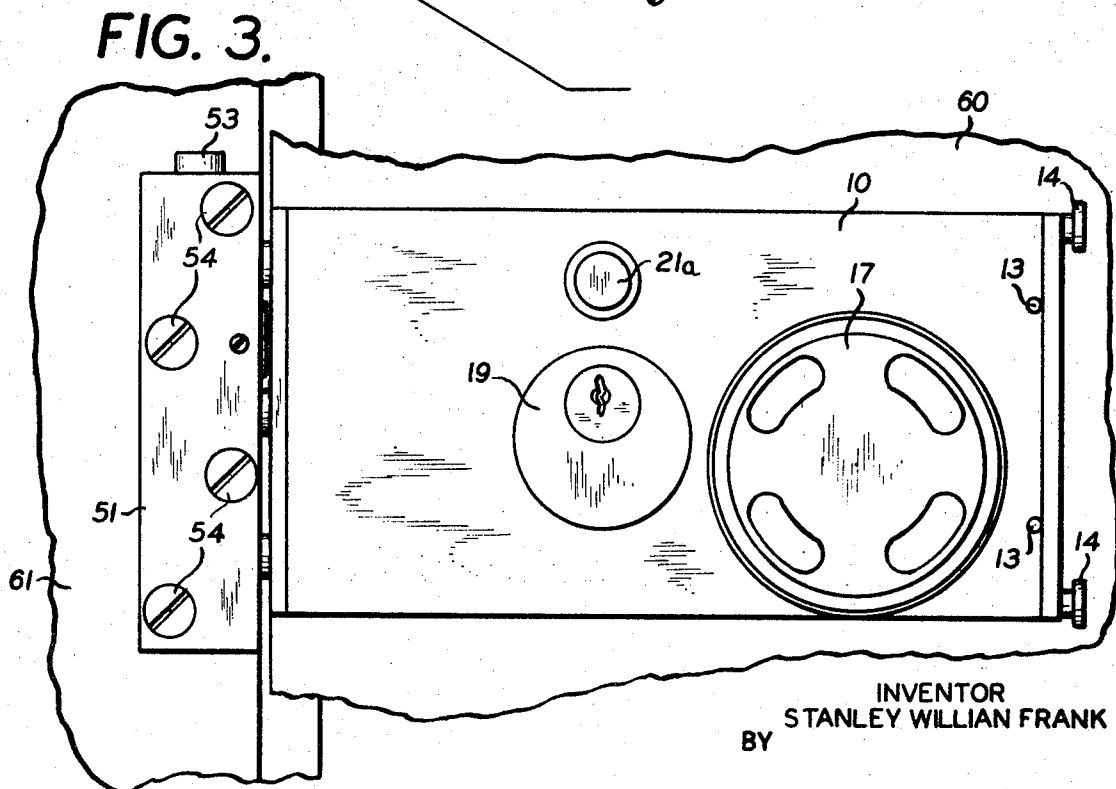
7 Claims, 11 Drawing Figures





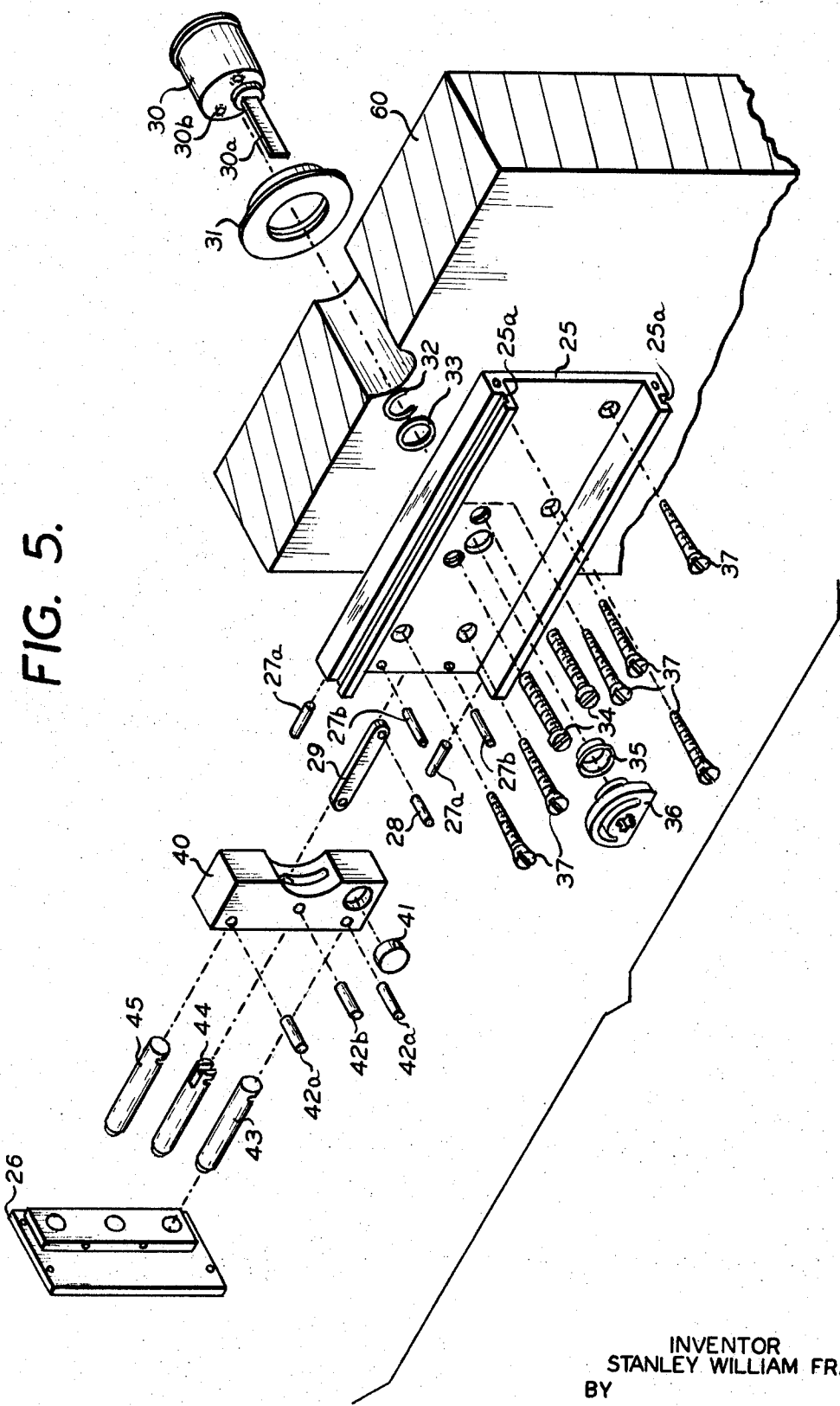
INVENTOR
BY STANLEY WILLIAM FRANK

**BURGESS, DINKLAGE & SPRUNG
ATTORNEYS.**



INVENTOR
STANLEY WILLIAM FRANK
BY

BURGESS, DINKLAGE & SPRUNG
ATTORNEYS.



BURGESS, DINKLAGE & SPRUNG
ATTORNEYS.

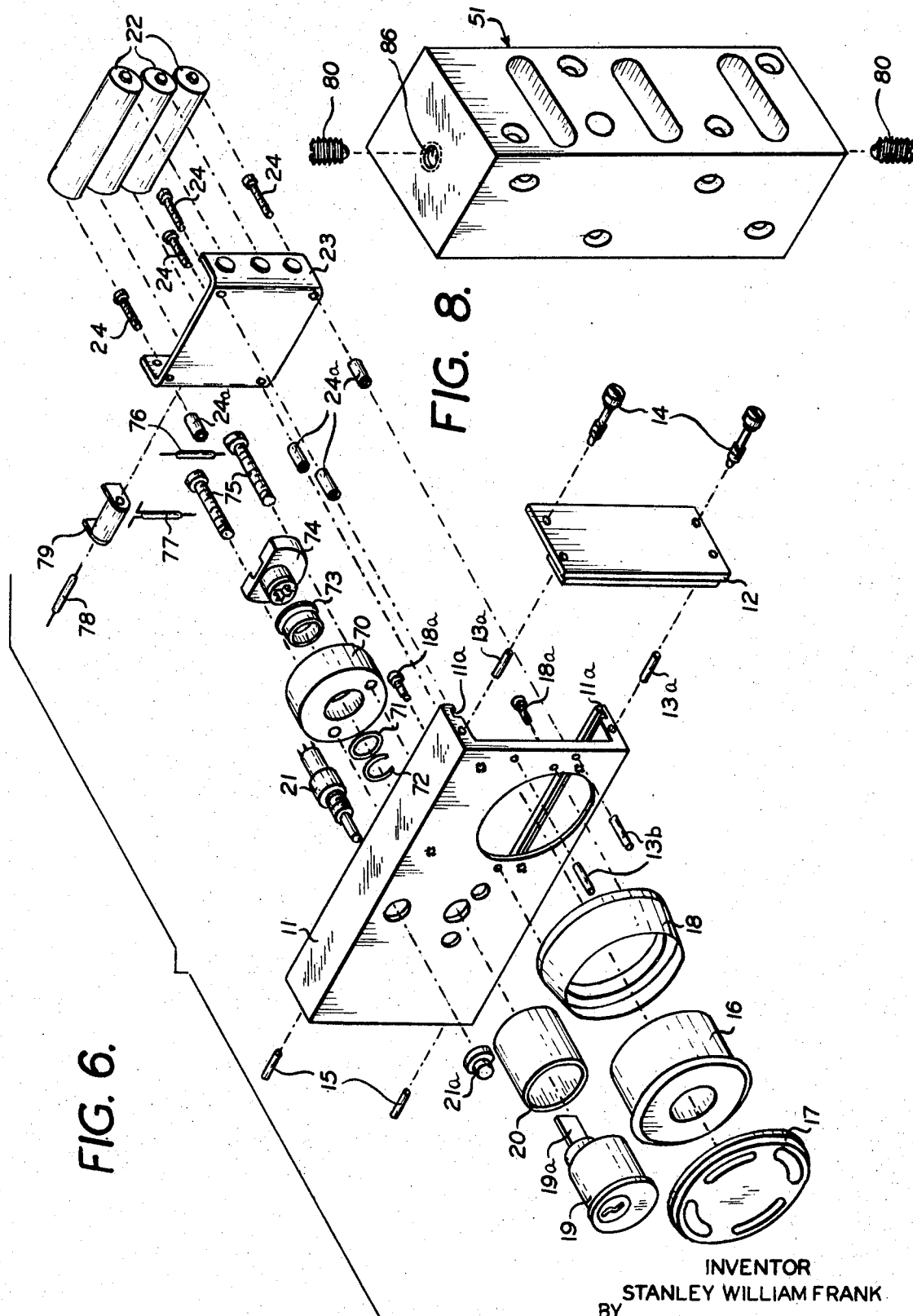
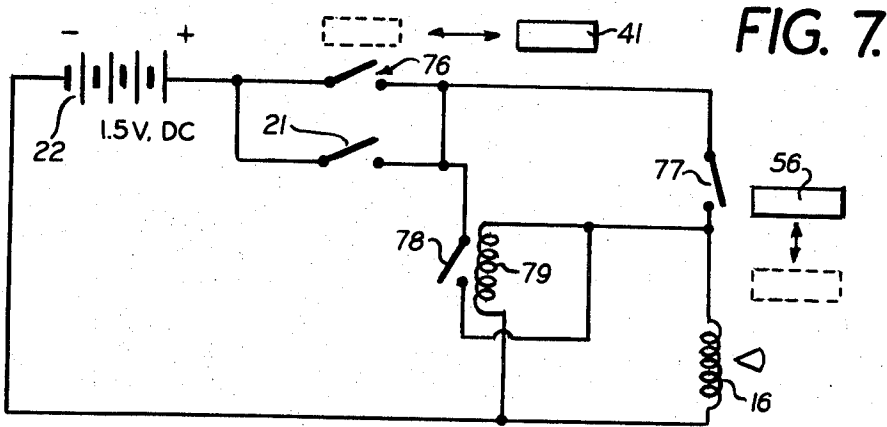
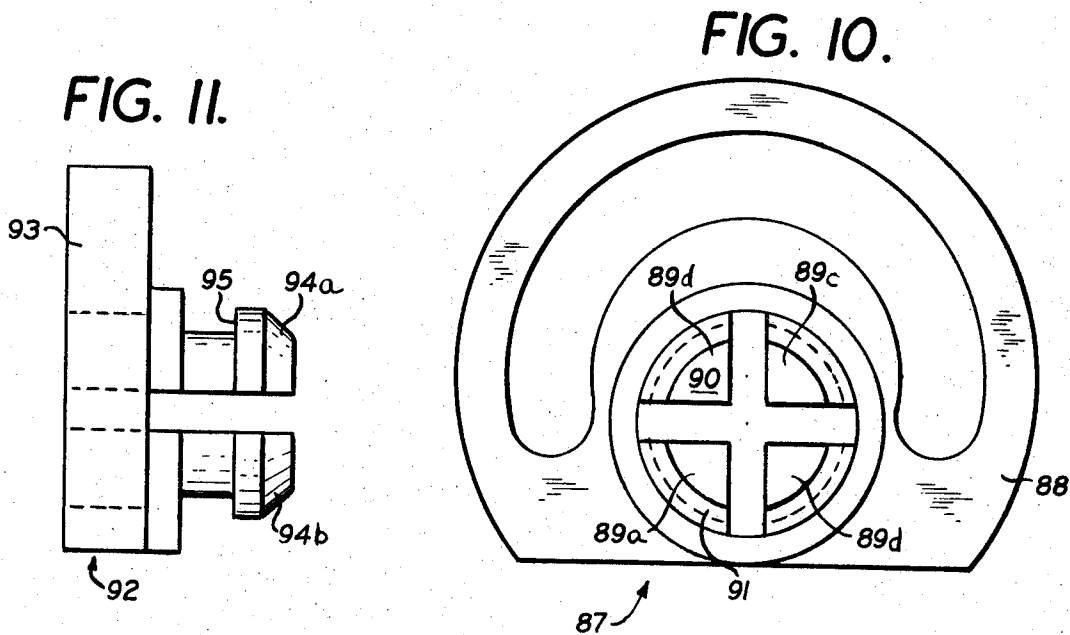
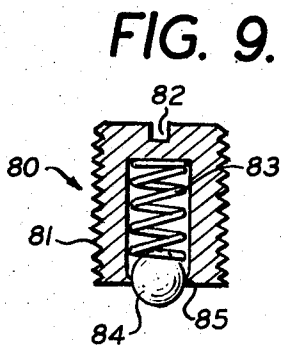


FIG. 6.

FIG. 8.

INVENTOR
 BY STANLEY WILLIAM FRANK
 BURGESS, DINKLAGE & SPRUNG
 ATTORNEYS.



INVENTOR
STANLEY WILLIAM FRANK
BY

BURGESS, DINKLAGE & SPRUNG
ATTORNEYS.

SELF-CONTAINED ALARM LOCK WITH TAMPER-PROOF INTERLOCKED CASING FORMED FROM EXTRUSION

RELATED APPLICATION

This application is a continuation-in-part of "Alarm-Lock," Ser. No. 676, 804, filed Oct. 20, 1967, and now abandoned.

PRIOR ART

U.S. Pat. No. 2,818,475 to Harry, Dec. 31, 1957; U.S. Pat. No. 3,067,364 to Russo, Dec. 4, 1962; U.S. Pat. No. 3,284,593 to Hawkins, Nov. 8, 1966; U.S. Pat. No. 3,427,413 to Hawkins, Feb. 11, 1969; U.S. Pat. No. 3,435,643 to Pollak et al., Apr. 1, 1969; U.S. Pat. No. 3,444,546 to Hawkins, May 13, 1969; U.S. Pat. No. 3,466,649 to Colman, Sept. 9, 1969.

PREAMBLE

As can be seen from the above prior art, many types of door locks have been suggested that will emit a noise when unauthorized entry or forcing of the door is attempted. Most of the prior art designs are quite complicated and use special components rather than "off-the-shelf" components, and thus are expensive. Many designs are unreliable in one manner or the other. For example the protective effect of devices having external components can usually be negated with a little tampering or "jimmying."

THIS INVENTION

This invention is an alarm lock for doors that is characterized by its simple rugged construction from widely available components or shapes, and by its reliable operation. While acting in the usual manner, key operated as a lock on a standard door or closure, the alarm lock makes an audible, persistent sound when an attempt is made to force the door or to otherwise effect an unauthorized entry. When a key is used to operate the lock in the usual manner, the alarm system is, of course, suitably inactivated so that the door can be opened or closed.

The present alarm lock has the following features:

1. It can use any standard cylinder mechanism now made.
2. Its lock-set (distance from edge of door to center-line of cylinder) is 2 $\frac{3}{8}$ inches, the standard in the industry, which enables the lock to be installed in existing doors without redrilling.
3. If the door has been forced open, and the alarm activated, it cannot be silenced by tampering or jimmying.
4. The two major external parts of the casing for the lock, and the striker, can be made from simple extruded shapes, if desired, and are designed to slide together in locking engagement.

The alarm lock has three main systems:

a. Lock-Interlock System

This is a conventional mechanical system whereby the door can be locked and unlocked. The design of the lock is such that the front and rear portions of the case cannot be mechanically disassembled unless the interior cylinder is operated with a key. This prevents alarm inactivation by removal of the batteries, cutting of the

circuit wires or otherwise interfering with the internal parts of the alarm.

b. Striker Plate - Shear Pin or Ball Plunger System

- 5 This is a mechanical system by which the door is held closed when the lock bolt is engaged therewith. If an attempt is made to force the door open, this system activates the alarm before the striker is torn loose from its mounting. Thus, further effort is required on the part of an intruder after the alarm has sounded if he still wishes to force the door.

c. Electronic Alarm System

- 15 This is an integral electronic system within and fully protected by the casing of the lock that in any one of several ways activates an integral and/or external alarm.

THE DRAWINGS

In the drawings:

FIG. 1 is a perspective view of the lock 10 and its striker 50 as mounted on a door 60 and door jamb 61;

FIG. 2 is a plan view of the alarm lock and its striker;

FIG. 3 is a front view;

FIG. 4 is an exploded view of the Striker Assembly, and illustrates a modification thereof with an adaptor 57 which permits another method of mounting;

FIG. 5 is an exploded view of the Rear Case Assembly of the alarm lock;

FIG. 6 is an exploded view of the Front Case Assembly, and

FIG. 7 is a schematic of the electrical system.

FIG. 8 is a perspective view of a modification of the striker plate;

FIG. 9 is a vertical section on an enlarged scale through the ball plunger of FIG. 8;

FIG. 10 is a lateral elevation of an alternative form of actuator; and

FIG. 11 is a plan view of an alternative form of actuator interlock.

The same parts have the same numbers throughout the drawings.

Identification of Parts

- | | |
|---------------------------------------|---|
| 10 Alarm lock, in general | 19 Std. interior cylinder assembly |
| 11 Front case extrusion | 20 Cylinder assembly stand off |
| 12 Right end plate | 21 Pushbutton switch (Grey Hill 46-502R) |
| 13 Right end plate retaining pin | 21a Pushbutton switch cap |
| 14 Captive screw | 22 Std. AA cell batteries |
| 15 Aligning pins | 23 Battery holder |
| 16 Horn | 24 Battery holder retaining screws |
| 17 Sound ring | 24a Battery holder stand off |
| 18 Horn bezel | |
| 18a Retaining screw | |
| 25 Rear case extrusion | 32 Retaining ring |
| 26 Left end plate | 33 Thrust washer |
| 27 Left end plate retaining pin | 34 Exterior assembly retaining screws |
| 28 Interlock pin | 35 Actuator bearing |
| 29 Link bar | 36 Actuator |
| 30 Exterior cylinder assembly | 37 Rear case retaining screws |
| 31 Exterior cylinder bezel | |
| 40 Bolt carrier | 43 Lower bolt |
| 41 Bolt magnet | 44 Center bolt |
| 42 Bolt retaining pin | 45 Upper bolt |
| 50 Striker in general | 54 Striker mount pins |
| 51 Striker plate | 55 Striker magnet holder |
| 52 Magnet holder set screw (nylon) | 56 Striker magnet |
| 53 Shear pin | 57 Adapter |
| 60 Door | 58 Adapter plate screws |
| 70 Actuator interlock bearing housing | 61 Door jamb |
| | 75 Interior cylinder assembly retaining screw |

71 Thrust washer	76 Bolt switch (Hamlin MRL 14 2-186)
72 Retaining ring	77 Striker switch (Hamlin MRL-DT-186)
73 Actuator interlock bearing	78 Latching switch (Hamlin MRL-2186)
74 Actuator interlock	79 Latching coil
80 Ball plunger	84 Ball
81 External threads	85 Lip
82 Turning slot	86 Tapped opening
83 Spring	
87 Actuator	89a, 89b, 89c, 89d Portions of projection 89
88 Base member	90 Tapered nose
89 Projection	91 Retaining collar
92 Actuator interlock	94 Projections
93 Base	95 Collar

DESCRIPTION

The lock has three main mechanical assemblies: the Striker Assembly, the Rear Case Assembly, and the Front Case Assembly. The assembly of each will be described prior to the installation on the door.

Striker Assembly

A shear pin 53 fits into a small hole on top of the striker plate 51. A striker magnet 56 fits within a magnet holder 55 and the holder is threaded into the striker plate. A set screw 52 of nylon is threaded into the striker plate 51 to hold the magnetic holder in place.

As an optional feature shown in FIG. 4, an adapter plate 57 with screws 56 to mount the same to the striker 51 and screws 54 for mounting to the door frame can be used for mounting of the striker with the mounting screws being protected by the edge of the door when closed.

Rear Case Assembly

An actuating bearing 35 is inserted in a mating hole in the rear case 25. Actuator 36 is inserted through the bearing 35 and a thrust washer 33 is installed around the shaft. A retaining ring 32 is installed in a retaining ring groove in the actuator 36.

Left end retaining pins 27a are press fit into blind holes in the rear of the case 25. The bolt magnet 41 is glued with an epoxy cement into the bolt carrier 40. The upper and lower bolts 45 and 43 respectively are inserted into mating blind holes in the bolt carrier 40 until 1/8 inch diameter cross holes therein line up with mating cross holes in the bolt carrier. The upper and lower bolts are then pinned to the bolt carrier with the upper and lower bolt retaining pins 42a. The center bolt 44 is also inserted into a mating hole in the bolt carrier 40 until its cross-hole lines up with the mating cross-hole in the bolt carrier. Link bar 29 is inserted into a mating slot in the center bolt 44 and the 1/8 inch diameter hole therein lines up with the hole in the center bolt. The center bolt and link bar are then pinned to the bolt carrier with the center bolt pivot pin 42b. The interlock pin 28 is then pressed fit into the other end of the link bar until it protrudes equally on both sides of the link bar.

The bolt carrier 40 assembly is then inserted into the rear case 25 so that the interlock pin 28 engages the radial slot in actuator 36.

Left end plate 26 is inserted over bolts 43, 44, 45 and press fitted onto the left end plate retaining pins 27a. Thereafter the retaining pins 27b are pressed into the mating holes in the raised portion of the end plate and the rear case 25.

Front Case Assembly

With reference to FIG. 6, the horn 16 is cemented into bezel 18 as with an epoxy cement and the sound ring 17 is cemented thereover. The horn bezel retaining screws 18a are inserted through mating holes in front case 11, pass through the spacers 13 and attach to the horn bezel 18.

The battery holder stand offs 24 are positioned over the threaded holders in the front case 11, and the retaining screws 24 are inserted through the battery holder 23 and the stand offs 24a and threaded into the holes in the front case. The push button switch 21 is inserted through a clearance hole in the front case and the finishing nut and switch cap assembly 21 are threaded thereon.

The latching switch 78 is epoxied into the core of the coil 79 and the coil 79, the striker switch 77, and the bolt switch 76 are temporarily cemented in place to the underside of the front case 11. The electrical wiring is complete (see FIG. 7) and the hole is encapsulated and permanently bonded into the case as with an epoxy resin.

Retaining pins 13a are inserted into mating blind holes in the end of the front case 11, the right end plate 12 is forced thereover, and the retaining pins 13b are then pressed into place to secure the same.

The actuator interlock bearing 73 is placed in the housing 70, the actuator interlock 74 is fitted therein, the thrust washer 71 is positioned, and the retaining ring 72 is then locked into place in the retaining groove in the interlock 74. The actuating interlock assembly is then centered around the axis of a usually 7/16 inch diameter hole in front of the case 11, the cylinder assembly stand off 20, and the cylinder 19 is positioned therethrough with the tongue 19a of the cylinder assembly engaging the cross-shaped opening in the actuator interlock 74. The retaining screws 75 are then inserted and threaded into the mating holes in the cylinder 19 to hold the whole assembly to the front case 11.

Aligning pins 15 are pressed into place in the left of the front case 11 and threaded captive screws 14 are placed in the right end plate 12.

Installation

The lock is installed by using an existing 1 3/4 inches diameter hole or dutting the same at the height desired. The exterior cylinder assembly retaining screws 34 are cut to the proper length, considering the thickness of the door. The exterior cylinder assembly 30 with its bezel 31 are inserted in the door, and the rear case is positioned so that the tongue of the exterior cylinder assembly 30 engages the cross-shaped hole of the actuator 36 with the tongue 30a being cut as necessary so that it does not protrude beyond the face of the actuator 36. The retaining screws 34 are then fastened through the rear plate of the door and into the threaded holes 30b in cylinder 30.

The position of the rear case 25 is adjusted until the left edge of the left end plate 26 is parallel with the end of the door and the screws 37 are then used to fasten the assembly to the door.

The mounting of the striker is obvious from the drawings. If the door molding and door are parallel, the striker 51 need only be positioned so that the bolts 43,

44, 45 enter the slots in the striker plate with approximately $\frac{1}{8}$ inch gap between the striker plate and the left end plate 26, with screws 54 then being inserted as shown in FIG. 1. If the door molding is perpendicular to the door, then the mounting arrangements are as shown in FIG. 4, using adapter plate 57. After the striker is mounted and checked to make sure that the bolts 43, 44, 45 move freely, the magnet holder 55 is advanced until it is quite close to the left end plate 26, for example within one-thirty-second of an inch, and then is secured in place with its set screw 52.

Thereafter the batteries 22 are inserted, and, with the door unlocked and the key inserted in the internal cylinder assembly, and rotated 90° counter-clockwise, the grooves 11a in the front case are mated with the grooves 25a and the associated projection of the back case, and the front case is slipped thereover to the extreme left and secured with the captive screws 14.

Mechanical locking and unlocking of the door is accomplished in the customary manner for the type of conventional cylinder assembly that is shown. In the following described sequence, the actuator interlock 74 remains in its original position, and interlock pin 28 is moved only by the actuator 36. The 0° locked is the normal position of the mechanism with the keys removed. With the key inserted and the mechanism turned to the 90° locked position, counter-clockwise, no motion is imparted to the interlock pin 28, as the end of the radial groove in the actuator 36 has not come in contact therewith. When the key has been turned 180°, the bolt starts to retract, and the radial groove in the actuator 36 is in contact with the interlock pin 28. With a 270° turning of the key, the bolt is 50 percent retracted, and the radial groove in actuator 36 has moved interlock pin 28 through an arc of 90°. The interlock pin 28 being interconnected with the link bar 29, bolt carrier 40 and bolts 43, 44, 45, has retracted the bolt carrier and bolts approximately half way out of the striker plate 51. When the key has been turned 360° to the unlocked position, the actuator 36 has moved the interlock pin 28 through an arc of 180°, its total travel distance. The actuator 36 has now returned to its original position, and the key can be withdrawn.

Locking is accomplished in the same fashion except that the actuator 36 rotates clockwise.

If the door is locked or unlocked from the outside by a cylinder 30, the clockwise and counter-clockwise motions described above are reversed.

It will be noted that the design of this invention prevents the lock from being disassembled without the use of a key. Since the front case 11 and rear case 25 are interlocked with the tongue and groove system which is an integral part of the front and rear case extrusions, they cannot be separated except by longitudinal motions. Normally the front case is prevented from longitudinal movement by two captive screws 14, but these screws are meant only to prevent excessive movement during normal locking operations and are not meant to prevent lock disassembly. As can be seen from the drawings, the actuator 36 is fastened to the rear case, and the actuator interlock 74 is fastened to the front case. The interlock pin 28 protrudes into the radial grooves in the actuator 36 and the actuator interlock 74, thus preventing any longitudinal movement

between the front case and the rear case when the lock is in its normal position with the keys removed.

As described above, all of the electronic components are located in the front case, and the circuits are rugged enough to operate under any conditions which do not destroy the lock itself. Magnetic reed switches are used which, in addition to having a life expectancy of approximately 100,000,000 cycles, can withstand high shock and vibration loads. The electronic circuit operates as follows: the batteries provide the power to operate the horn, and the horn sounds an alarm under appropriate conditions. The striker switch 77 detects whether the door is open or closed, bolt switch 76 detects whether it is locked or unlocked, and latching switch 78 prevents inactivation once the horn has been activated unless both pushbutton switch 21 and bolt switch 76 are in the off position. The pushbutton switch can be used to test the batteries by activating the horn when the door is open and unlocked. It can also be used to activate the horn when the door is opened, regardless of whether the lock is locked or unlocked, as an additional security measure, as, for example, when one has answered the door and the caller is an alarming person.

The striker magnet 56 holds the striker switch 77 in the "off" position when the door closure is closed. A movement of approximately one-fourth inch of the door or closure causes the striker switch 77 to switch to the "on" position, thereby activating the horn 16. The bolt magnet 41 holds both switch 76 in the "on" position when the lock is locked and allows the bolt switch 39 to switch to the "off" position when the lock is unlocked.

With the lock in the unlocked position and the pushbutton switch 21 in the "off" position (out), the door or closure can be opened and closed without activating the horn 16. With the lock in the unlocked position and the pushbutton switch 21 in the "on" position (in), the horn 16 is activated by opening the door. To inactivate the horn, the pushbutton switch 21 must be returned to the "off" position.

When the lock is in the locked position and the door is being forced open, the shear pin 53 is broken off by the bolts 43, 44, 45, which then allows enough movement of the lock so that the striker switch 77 moves out of the magnetic field of the striker magnet 56, thereby closing the switch and activating the horn 16. The position of the pushbutton switch 21 (on or off) does not matter since the horn 16 will activate when the door or closure is forced open, regardless of the position of the pushbutton switch.

When the door is locked and opened with a key and pushbutton switch 21 is in the "off" position, the horn will not activate. When the lock is opened with a key and the pushbutton switch is in the "on" position, the horn will activate when the door is opened. The pushbutton switch 21 cannot be set to the "on" position before leaving a room, as the horn will activate when the door is opened and cannot be inactivated or reset from the outside of the room.

In FIGS. 8 to 11 there are shown some minor modifications of sub-assemblies which may be utilized.

In FIG. 8 there is shown a modification of the striker shown in FIG. 1. In the embodiment of FIG. 1 the shear pin 53 must be broken by movement of the door rela-

tive to the striker plate 51. The force necessary to break this pin may range from about 200 to 500 pounds, depending upon the type of material used for the pin and its construction. For some applications, a force of this magnitude may be excessive, i.e., the striker plate may be torn loose from its mounting before the pin breaks. In such event, if the door were forced open the alarm would not be activated. To reduce this force, i.e., so that movement between the door and striker plate may be achieved at lower force levels, the shear pin 53 may be replaced with one or more ball plungers 80 of the construction shown in FIG. 9 and disposed as shown in FIG. 8. The ball plunger 80 comprises a set screw having external threads 81 and a turning slot 82. The core of the screw is hollow and houses a spring 83 which is compressed by a ball 84, prevented from falling out by intumed lip 85.

As shown in FIG. 8 the ball plunger 80 is threaded into a correspondingly tapped opening 86 which replaces the small hole on top of the striker plate 51 into which pin 53 was fit in the embodiment of FIG. 1. The set screw is threaded down so far that the ball 84 projects into the path of one of bolts 43, 44, and 45. If desired, a plurality of such ball plungers may be provided or the force on the spring may be varied. At any rate, in this fashion the force required to displace the striker plate relative to the door is just a fraction of that required to shear pin 53, e.g., about 25 to 50 pounds.

In FIGS. 10 and 11 there is shown a modification of the actuator and the actuator interlock. In the alternatives shown in FIGS. 10 and 11, the actuator and actuator interlock are formed of a resilient material such as polyacetal plastic in preference to metal. In place of the cross-shaped holes in the hub of actuator 36 there is provided an actuator 87 comprising a base member 88 and a four-part projection 89a, 89b, 89c, 89d whose components are so positioned so as to define a cross-shaped space. Further, the projections are contoured so as to provide a tapered nose 90 and a retaining collar 91 of such dimension that it accommodates the thickness of its case. The taper 90 permits the hub to be pressed through the hole in its case and the cross-shaped opening allows temporary elastic deformation, the portions 89a, 89b, 89c and 89d returning to their initial positions after the collar has been seated. In this manner no washers and retaining rings are necessary to secure the hub in position. An alternative embodiment to actuator interlock 74 is shown in FIG. 11 where the interlock 92 comprises a base 93, four projections 94 forming a crossed slot and tapered at their front ends with a collar 95. The interlock 92 seats in the same fashion on its case as does actuator 87, thereby eliminating the actuator bearing 35, interlock bearing 73, thrust washer 33, interlock thrust washer 71, retaining ring 32 and interlock retaining ring 72 shown in FIGS. 5 and 6 as necessary for assembly and retention of the actuator 36 and actuator interlock 74.

It will be noted that most of the parts of the present lock can be made up of machine bar stock and extrusions. Alternatively, of course, all the parts of the lock can be made by die casting, molding, stamping and/or other methods of high-volume manufactures. As indicated in the identification of the parts, the major parts such as the pushbutton switch, the lock cylinder

assembly, the reed switches, and the like, are standard manufactured items that can be purchased off the shelf.

Although only one electronic circuit has been illustrated, many different types of circuits are possible, depending upon the requirements of the user. Wires, for example, can be installed in parallel with the horn 16 and connected to a relay or other electronic device, which can be used to send an electronic signal to activate a secondary alarm system and/or to send a signal to the police, a main alarm system, a radio transmitter and the like. If desired, the horn could be disconnected in such a parallel wires system and a "silent" alarm sent out. The circuit can be modified so that one is able to leave a room and set the lock to activate the horn when the doors open again. This would make it impossible to pick the lock without setting off the horn.

Any type of proximity switch can be used (physical contact, photo-electric ultrasonic and the like) in place of the magnetic reed switches. The interior and exterior cylinder assemblies can be the pick-proof type that are commercially available with no modification of the alarm lock being necessary. Although the lock illustrated uses two cylinder assemblies, the interior cylinder assembly can be replaced with a knob or handle, again with no modification of the lock being necessary.

It will be appreciated that the instant specification and examples are set forth by way of illustration and not limitation, and that various modifications and changes may be made without departing from the spirit and scope of the present invention.

I claim:

1. In a self-contained alarm lock assembly having a casing containing a key-operated cylinder lock and an internal alarm system and adapted to be mounted on a closure member, and a striker adapted to be mounted on the jamb associated with said closure member and mating with and retaining the bolt of said lock when the same is in a locked position, the improvement comprising an alarm circuit within said casing, including:

1. an internal power supply
 2. an alarm, operating from said power supply and in electrical combination therewith
 3. a bolt switch actuated by said cylinder lock and adapted to be "on" when said bolt is in said striker, and otherwise to be "off"
 4. a striker switch in said closure member actuatable by movement of said closure member relative to said striker and adapted to be "off" when said closure member is fully seated in said jamb, and otherwise to be "on," and
 5. a latching switch in electrical combination with a coil to hold a circuit including said power source and said alarm in closed position to actuate said alarm, said latching switch adapted to be "on" once said alarm is activated, and otherwise to be "off" and once "on" to remain so until said bolt switch is placed in the "off" position, said alarm circuit being adapted to when said lock is in the locked position, and said closure member is moved slightly ajar, turn said striker switch "on," activating said alarm.
2. The alarm lock of claim 1 wherein:
3. said bolt switch is a magnetic reed switch, and said bolt includes a magnet associated therewith,

4. said striker switch is a magnetic reed switch, and said striker includes a magnet associated therewith, and

5. said latching switch is a magnetic reed switch disposed in a coil operating from power flowing to said alarm, and said alarm is an audible horn.

3. The alarm lock of claim 1 wherein said casing comprising two front and back longitudinally slidably interlocking channel sections, the back one thereof being adapted to be mounted on said closure member and to retain the actuator and external cylinder of said cylinder lock, and the front one thereof being adapted to retain the actuator-interlock of said cylinder lock, the whole being adapted to prevent the front section from being removed from the back section unless the interior cylinder assembly of said cylinder lock is operated with a key.

4. The alarm lock of claim 3 wherein said casing is sealed at the ends with end plates mating therewith and held with flush press fitted pins positioned both longitu-

dinally and perpendicularly to the major axis of said channel members.

5. The alarm lock of claim 1 wherein said striker includes a member extending downwardly therethrough perpendicular to the axis of movement of said bolt and disposed to the outside of said bolt in the direction of opening, said member normally helping to retain said bolt in the locked position, the openings in said striker to receive said member permitting said member to be displaced when said alarm lock is sufficiently forced and to thereafter permit sufficient movement to cause activation of said striker switch without dislodgement of said striker from said jamb.

6. The alarm lock of claim 5, wherein said member comprises a shear pin.

7. The alarm lock of claim 5, wherein said member comprises at least one element resiliently urged toward said bolt.

* * * * *

25

30

35

40

45

50

55

60

65