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J. A. WALSTON

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COMBINATION LOCK LATCH MEANS

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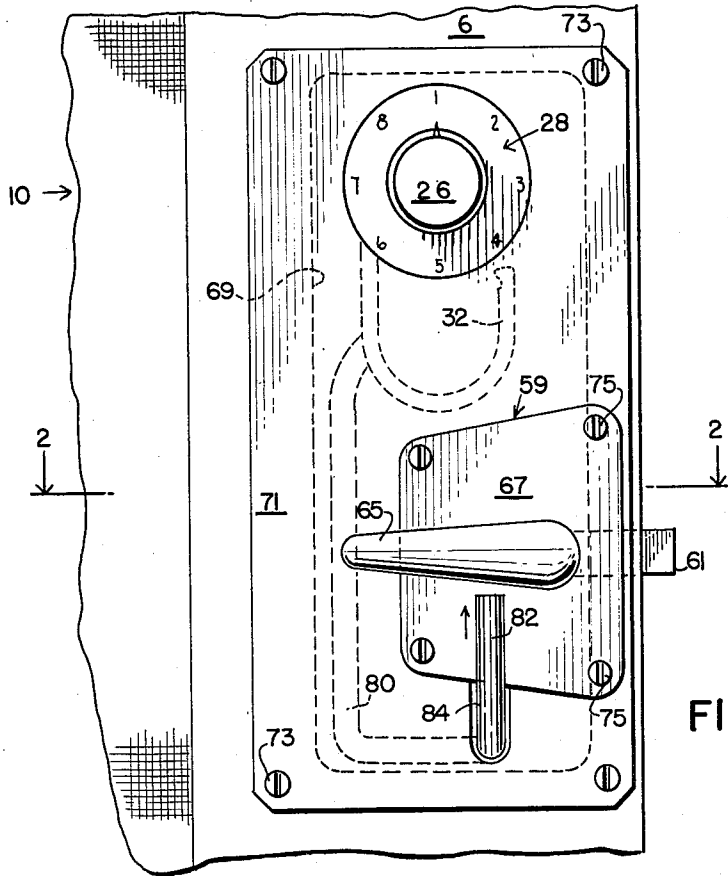


FIG. 1

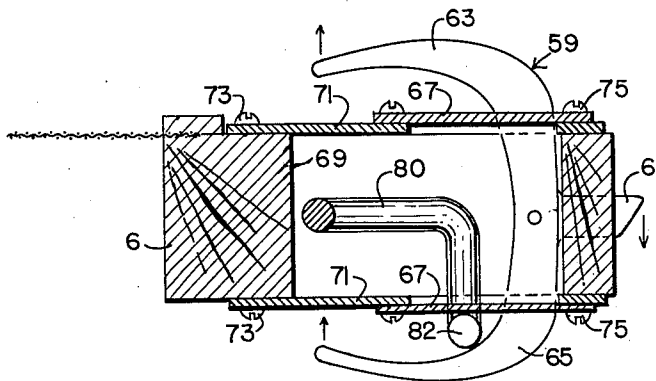


FIG. 2

INVENTOR.
J. A. WALSTON

BY
John H. Widdowson
ATTORNEY

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3,107,513

COMBINATION LOCK LATCH MEANS

James A. Walston, 4618 Pattie, Wichita, Kans.

Original application Apr. 28, 1958, Ser. No. 731,395, now Patent No. 3,006,180, dated Oct. 31, 1961. Divided and this application Sept. 11, 1961, Ser. No. 142,998
2 Claims. (Cl. 70-213)

This invention relates to doors, windows, and the like. In a more specific aspect this invention relates to screen and/or storm doors and latch means therefor. In still a more specific aspect this invention relates to latch means particularly advantageously used with a screen and/or storm door and employing a combination lock, or adapting a common screen and/or storm door latch for locking with a combination lock. In yet a more specific aspect this invention relates to equipping a screen door or doors of a house with a latch means which functions upon the operation of or as the result of combination lock mechanism, so that children can be contained within the house while the primary doors are open and the screen doors closed.

This application is a division of application Serial No. 731,395 filed April 28, 1958, now Patent No. 3,006,180.

Screen and/or storm doors and storm windows and/or window screens for buildings, in particular dwelling houses, have been known for a long time. These doors and windows are in many instances provided with a latch, especially doors, and it is desirable in almost all cases to have the doors latched to prevent them from blowing open, or to prevent entry into the dwelling house through the door by undesirable animals or unauthorized person. The common latch means used on screen doors extends from the simple hook and eye, one of which is mounted on the screen door along the side thereof and the other on the door casing, to the common and standard latch having a slidably mounted bolt which is operated from either side of the door by an operator and which is usually arcuate and transverse to the side rail of the screen door. In any event, in the case of these prior art latch means, it is relatively easy for children to open the latches, by releasing the hook or releasing the latch lock normally incorporated in the usual screen door latch. This is not only dangerous in some cases with children of tender years, but is very inconvenient and undesirable from the standpoint of the mother, she not being able to assume that the children will stay in the house, etc. Keys, hooks and eyes, and the common pivoted latch locking means are easily mastered even by very small children. On the other hand, the common and usual combination lock having an engaging member (normally U-shaped) slidably mounted in the body of the lock, and an operator to operate the lock mechanism in conjunction with a dial face, is very difficult for a small child to master, and even those children capable of operating a combination lock can be prevented from doing so by not being told the combination to the lock. By adapting the common and widely available combination lock of the prior art to latching a screen and/or storm door, I have overcome all of the disadvantages encountered with the usual screen and/or storm door and its relatively easy to operate latch means. The new combination lock latch means of my invention can easily be embodied in separate latch means, or the combination lock can be utilized by an embodiment wherein it cooperatively functions in combination with the common and usual latch means having an operator on the outside of the door which is disposed transverse to the side rail of the screen and/or storm door. The new latch means of my invention is particularly easy and economical to make, and it is reliable and efficient in use.

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The new latch means of my invention utilizes a combination lock which has an engaging member slidably mounted in the body thereof and which has an operator, usually a rotatable operator to work the lock mechanism, such being used in conjunction with a dial. The combination lock is mounted on the door along an edge thereof, usually the side opposite from which the door is hinged and in close relation to the door casing wherein is mounted the recess or hole forming member which receives the bolt of the latch. The door has a bolt movably mounted therein. Latch operator means is mounted and operable to operate this bolt. A connecting member which is fixed to the engaging member of the combination lock to move therewith is employed, such connecting member moving upon operation of the combination lock operator. This connecting member is positionable upon movement of the engaging member of the combination lock to prevent operation of the latch operator. The combination lock is operated to one of the locked positions to in turn lock the latch of the door against movement, that is, the engaging member of the combination lock is locked into one of its locked positions by operation of the combination lock mechanism.

It is an object of this invention to provide new door and/or window means.

It is another object of this invention to provide new storm and/or screen door means having new combination lock latch means.

Another object of this invention is to provide new latch means for storm and/or screen doors wherein common combination lock means is employed.

Yet another object of this invention is to provide new latch means for screen and/or storm doors wherein combination lock means is used in combination with common and usual latch means having an operator on the outside of the screen and/or door disposed transverse the side rail thereof.

It is another object of this invention to provide new latch means for screen and/or storm doors which cannot be operated by children of tender years, and which takes knowledge of a combination lock combination to unlatch the door, if such is latched by the combination lock being in one of its locked positions.

Still another object of this invention is to provide combination lock latch means utilizing a common and available combination lock in an easy to make and inexpensive combination apparatus which is convenient and reliable in use.

Other objects and advantages of the new latch means of my invention will become apparent to those skilled in the art upon reading this disclosure.

Drawings accompany and are a part of this disclosure. These drawings depict a preferred specific embodiment of the new latch means of my invention, and it is to be understood that such drawings are not to unduly limit the scope of my invention.

In the drawings,

FIG. 1 is a front elevation of a preferred specific embodiment of my invention as incorporated into a screen door shown partly cut away, such combination lock means cooperatively acting in structural combination with a common and usual screen door latch having an arcuate latch operator on the outside of the door disposed transverse to the side rail of the screen door.

FIG. 2 is a view taken on line 2-2 of FIG. 1.

Following is a discussion and description of the new combination lock latch means of my invention made with reference to the drawings whereon the same reference numerals are used to indicate the same parts or structure. The discussion and description are of a preferred specific embodiment of the new latch means of my inven-

tion, and it is to be understood that such are not to unduly limit the scope of my invention.

FIGS. 1 and 2 of the drawings show a preferred specific embodiment of the new latch means of my invention wherein a combination lock 28 of common construction is adapted to work with the common or usual latch means 59 having a latch bolt 61 slidably mounted and operated from within or without a door 10 by an outer arcuate latch operator 63 and an inner arcuate latch operator 65, such being disposed transverse to the side rail 6 of the door 10. The latching mechanism is mounted in side rail 6 of the screen door adjacent the door casing having the member providing the hole (not shown) to receive the outer end portion of latch bolt 61 to latch the door in the casing (not shown). Plates 67 are common and usual in a latch 59.

The side rail 6 of screen door 10 is cut out to form a hollow defined by dotted lines 69 (FIG. 1) adjacent the common latch 59. Covers or plates 71 are made to cover this formed hollow, such preferably fitting under the usual plates 67. Screws 73 conveniently mount these cover plates 71 on side rail 6, and the usual screws 75 can be used to mount plates 67.

Within the hollow formed in side rail 6 is mounted a common combination lock 28 having a dial operator 26, the dial operator and dial of lock 28 preferably projecting through or being visible through an opening in plate 71. Lock 28 has the usual slidably mounted engaging member 32 which slides in and out of the body portion of lock 28. The back of lock 28 can be secured to one of the plates 71 or held in position by other suitable means. A latch locking member 80 is secured to engaging member 32 in any suitable manner, such as by welding. This latch locking member 80 is preferably positioned and of the shape shown in FIGS. 1 and 2. The lower or outer end portion 82 projects out through aperture 84 in inside cover plate 71, and it is positioned so that when engaging member 32 is retracted into the body of lock 28 the portion 82 projects under latch operator arcuate arm 65 so that it cannot be pushed inwardly toward the door to retract latch bolt 61. Thus, with combination lock 28 in normal lock position, that is, engaging member 32 retracted into the body of the lock, the latch mechanism common to the door cannot be operated to open the door. In the positions shown in FIG. 1

of the drawings, the door can be operated in the usual manner, that is, latch operator 65 can be pushed inwardly to retract latch bolt 61.

As will be evident to those skilled in the art, various modifications of this invention can be made, or followed, in the light of this disclosure and discussion, without departing from the spirit of the disclosure or from the scope of the claims.

What is claimed is:

1. Latch means for a door having a frame, being hingedly mounted in a casing and having a common latch mounted thereon with an arcuate latch operator disposed transverse to said frame, comprising, in combination, a recess formed in said frame adjacent said common latch, a cover over said recess, a dial-type combination lock having a U-shaped engaging member slidably and operatively mounted in the body thereof and fixedly secured in said recess with the dial operator of said lock projecting outwardly through an opening in said cover, and a latch locking member fixed in one end portion to said U-shaped member to move therewith and the other end portion projecting out through an aperture in said cover, said last-named end portion of said locking member being positionable under said arcuate latch operator upon operation of said combination lock by said dial operator to prevent operation of said latch operator.

2. Latch means for a door having a common latch mounted thereon with a latch operator on the outside thereof, comprising, in combination, a recess formed in said door in the vicinity of said common latch, a combination lock having a U-shaped engaging member slidably and operably mounted in the body thereof mounted in said recess with the operator of said combination lock in position for operation, and a latch locking member fixed in one end portion to said U-shaped engaging member of said combination lock to move therewith, and the other end portion being positionable under said latch operator upon operation of said combination lock by said lock operator to prevent operation of said latch operator.

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