March 19, 1963 A. E. MINTZ 3,081,616

SAFETY LOCK

Filed Dec. 21, 1960

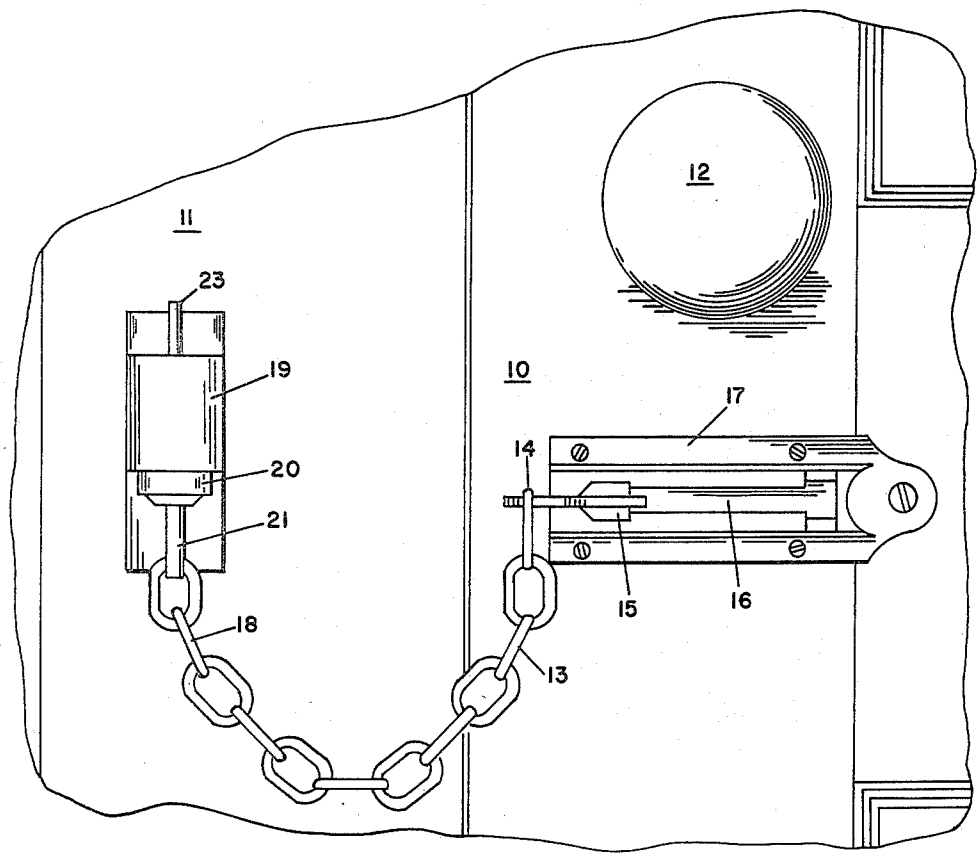


Fig.1

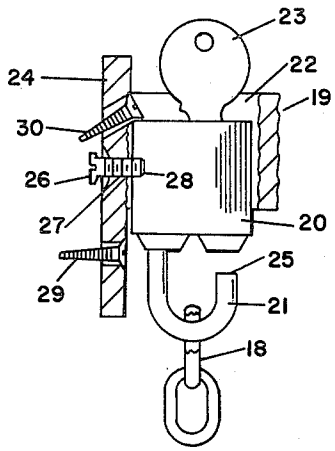


Fig.2

Albert E. Mintz

INVENTOR

Robert O. Richardson

ATTORNEY

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SAFETY LOCK

Albert E. Mintz, Rego Park, N.Y., assignor of fifty per-cent each to Robert O. Richardson, Nashua, N.H., and Dock & Dock, New York, N.Y., a partnership

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This invention relates to safety locks and more specifically, it relates to safety locks of the door chain type which may be locked and unlocked on one side of a door by a person without a key and which may be locked and unlocked on the other side by an authorized person with a key.

In my co-pending application, Serial No. 718,035, filed February 27, 1958, and which matured December 27, 1960, into Patent No. 2,966,053, of which this is a continuation-in-part, there is disclosed a casing attached to a door frame and a chain releasably mounted to the inside of a door. The chain had a locking plug at the opposite end which was connected to the casing and required a key to separate it therefrom. The chain was of such length that the door could be partially opened to the extent that a key could be passed through from the outside to unlock and remove the plug from the casing.

The safety lock comprising the present invention is similar in principle to that of my co-pending application except that in the present instance the locking plug remains connected to the casing on the door frame and the locking arrangement secures the chain to the plug or permits separation therefrom as desired. The locking mechanism includes a chain receiving means which is held in locked position by a retention portion positioned in an opening in the casing. In one form this permits the use of an ordinary padlock to be used as the plug to which the chain may be attached and detached. Since this makes the plug readily available from commercial sources at prices much less than the cost of special locking plugs, the price of the present safety lock becomes quite competitive with conventional door chains that does not have the advantage of permitting opening from the outside by a person with a key.

FIGURE 1 is a perspective view of the safety lock of the door chain type as viewed from the side of the door to which it is mounted, and

FIGURE 2 is a vertical cross-sectional view of the casing.

Referring now to FIGURE 1, there is shown a fragmentary portion of a door **10** and door frame **11**. The door has a knob **12**, and the usual door locks which are not shown in the drawing.

In the preferred embodiment of the invention a door chain **13** is shown attached at one end **14** to the slide part **15** which engages a slot **16** in a standard chain bracket **17** secured to the door **10**. The length of the chain **13** is such that with the other end **18** affixed to the door frame **11**, the slide part **15** cannot be released from the bracket **16** until the door **10** is substantially fully closed.

The chain end **18** is affixed to door frame **11** through the frame mounted casing **19** having an inverted padlock **20** contained therein. End **18** of the chain is shown engaging the padlock loop **21**. The casing **19** is open at the top to permit insertion of a key into the lock of the padlock to release the padlock loop **21** so that the end **18** of the chain may be readily removed.

It should now be apparent that the unlocking of the padlock and freeing of the end **18** of the chain may be easily accomplished from the other side of the door by opening the door within the limits prescribed by the chain, and then inserting the proper key in the conveniently located keyhole of the padlock at the upper end of the casing. Likewise, upon leaving the house, the chain end may be readily placed over the padlock loop and the loop snapped shut by a person on the outside, so that the opening of the door will again be restricted by the chain.

It also should be apparent that with the padlock **20** locked, the slide part **15** and bracket **17** function in the manner of conventional door chain locks, permitting a person on the inside to lock and unlock the door as desired without resorting to using a key in the padlock.

It will be understood that the invention is not to be considered as limited to the use of a slide and bracket at the other end of the chain since the end **14** of the chain could be secured to the door in a fixed position if desired. The use of the slide and bracket, however, provides greater convenience for the householder by making it possible to release that end of the chain in the conventional manner. Also, if desired, the casing could be secured instead to the door with the other end of the chain fastened to the door frame.

In FIGURE 2, the casing **19** is shown in cross-section to better show the attachment of the padlock **20**. Here an opening **22** extends through the casing **19** and is adapted to receive the padlock **20** with the padlock loop **21** extending downwardly and to permit insertion of the key **23** at the top. The casing is thus preferably about the same length as the body of the padlock.

As shown, the axis of the opening **22** preferably slants inwardly at the bottom toward mounting plate **24**. This provides more clearance from the wall for rotating the key **23** and slants the padlock loop **21** somewhat nearer the mounting plate. This provides an unusual advantage in that when the loop **21** is opened, the weight of the chain **13** being slightly off center toward the free end **25** causes it to turn toward the door to facilitate easy removal of the end of the chain therefrom.

The padlock may be retained in the casing by some means such as retainer screw **26** inserted through an opening **27** in the mounting plate **24** and into a small recess **28** in the body of the padlock **20**. The mounting plate may be attached to the door frame by means of screws **29**, **30**, one of which is not perpendicular to the plate **24** for greater fastening security.

While certain preferred embodiments of the invention have been specifically disclosed, it is understood that the invention is not limited thereto as many variations will be readily apparent to those skilled in the art and the invention is to be given its broadest possible interpretation within the terms of the following claims:

What is claimed is:

1. A safety lock comprising a chain with means for attachment to the inside of a door, a padlock releasably connected to said chain, a door frame mounted casing having an opening therein for receiving the body of said padlock in inverted position, means retaining said padlock in said opening, said chain being of such length as to permit the door to be partially opened to permit insertion from outside the door of a key into said padlock to free said chain therefrom when said door, chain, padlock and casing are connected.

2. A safety lock comprising a chain with means for attachment to the inside of a door, a padlock releasably connected to said chain, a door frame mounted casing having an opening therein for receiving the body of said padlock in inverted position, said opening being slightly slanted to position said padlock non-vertical, means retaining said padlock in said opening, said chain being of such length as to permit the door to be partially opened to permit insertion from outside the door of an unlocking means into said padlock to free said chain from the

loop of said padlock when said door, chain, padlock and casing are connected.

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