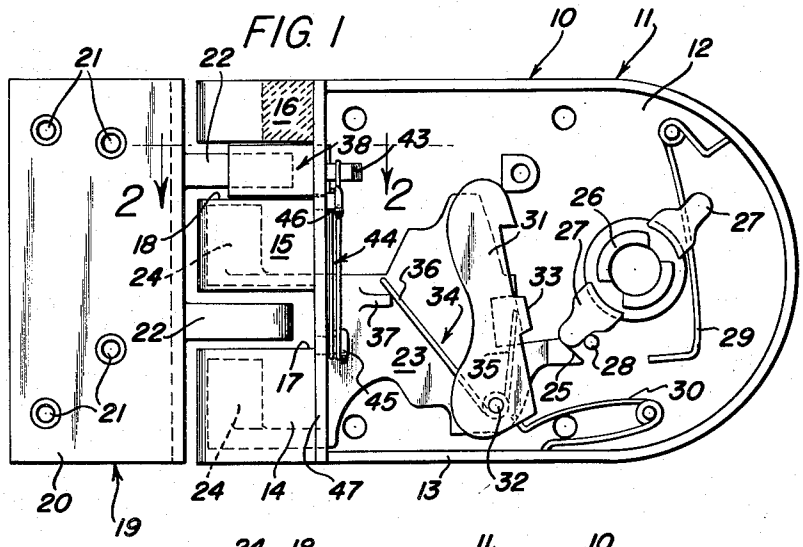
Aug. 8, 1961 F. A. BROWNING 2,995,394

LOCK

Filed Nov. 20, 1958

FIG. 1



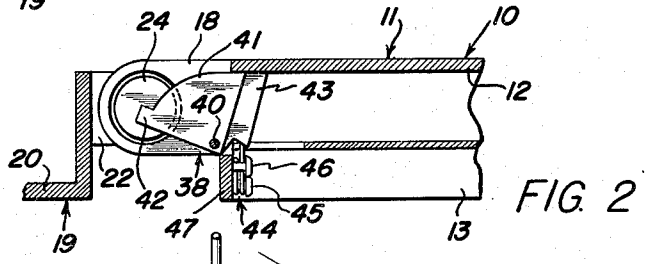


FIG. 2

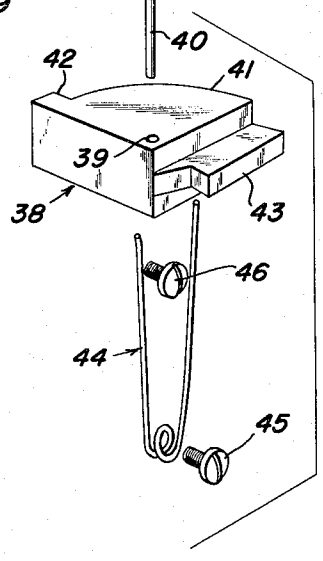


FIG. 3

INVENTOR

FRANK A. BROWNING

BY Louis Parker

ATTORNEY

United States Patent Office

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LOCK

Frank A. Browning, 310 W. 95th St.,
New York 25, N.Y.

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This invention relates to a lock, and more particularly to an improvement on a lock such as a lock of the Segal type.

The object of the invention is to provide a lock which embodies improved safety features so that the likelihood or possibility of the lock being opened or picked by unauthorized persons is prevented or minimized.

Another object of the invention is to provide a lock which is convenient to use, since it can be readily locked from both the inside and outside, and wherein the lock includes an improved safety arrangement which will prevent burglars or the like from entering a building, dwelling or other structure equipped with the lock, and wherein a means is provided for preventing the door from becoming locked unintentionally.

A still further object of the invention is to provide an improved lock which cannot be forced open by an instrument and wherein the lock can be held in unlocked position when desired, and wherein there is also provided a means for conveniently holding the device in locked position when required or desired.

A further object of the invention is to provide a lock which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

FIGURE 1 is a plan view illustrating the lock of the present invention;

FIGURE 2 is a sectional view taken on the line 2—2 of FIGURE 1; and

FIGURE 3 is a fragmentary perspective view illustrating certain constructional details of the present invention.

Referring in detail to the drawings, the numeral **10** indicates the lock of the present invention which is shown to comprise a hollow housing **11**, and the housing **11** embodies a back wall **12**, and an outer wall member **13**. The numerals **14**, **15** and **16** indicate spaced parallel fingers, of which fingers **14** and **15** are hollow and finger **16** is half filled in, as indicated by the shading, so as to leave a seating for the latch **38**, thereby preventing pressure on the latch being entirely borne by the pivot screw **40**. This fill-in is flush with the edges of the finger so as to make smooth slide for the trigger, which otherwise is likely to catch on the edge of the finger. The outer half of the finger **16** is left hollow so that the plunger, when in locked position, would have its aperture within which to slide. The fingers extend from an end of the housing **11**, and the fingers **14**, **15** and **16** define therebetween spaced parallel slots **17** and **18** for a purpose to be later described.

There is further provided a hasp which is indicated generally by the numeral **19**, and the hasp **19** includes a mounting plate **20** which is provided with a plurality of spaced apart openings **21** therein whereby securing elements such as mounting screws can be extended through the openings **21** for fastening the hasp **19** to a suitable supporting structure. The numeral **22** designates spaced parallel apertured lugs which extend from the hasp **19** and which are formed integral therewith or secured thereto, and the lugs **22** are adapted to project into the slots **17** and **18**, as for example as shown in FIGURE 1.

The numeral **23** indicates a base which is slidably mounted in the housing **11**, and the base **23** carries a pair of alined cylindrical bars **24** which are mounted for movement into and out of engagement with the fingers and lugs. Arranged on the base **23** is an inclined lip **25**. The numeral **26** indicates a bushing which is rotatably connected to the back wall **12**, and a pair of diametrically opposed teeth **27** are connected to the bushing **26**. The teeth **27** are adapted to engage the inclined lip **25** on the base **23**, and a stop pin **28** is provided for limiting rotation of the teeth **27** in one direction. The numeral **29** indicates a first spring member which is arranged in the housing **11**, and a second spring member **30** has an end portion thereof connected to the base **23**.

The numeral **31** indicates a lever which is pivotally connected to the base **23** by means of a pivot pin **32**, and the lever **31** is provided with a flange **33**. The numeral **34** indicates a third spring member which has an end **35** arranged in engagement with the flange **33**, while the other end **36** of the spring member **34** engages a shoulder **37** on the base **23**.

As shown in the drawings, there is further provided a sector shaped latch **38** which is pivotally connected to the housing **11** by means of a pivot pin **40** which engages an opening **39** in the latch **38**. The latch **38** is shaped to provide an arcuate surface **41** which defines a shoulder **42**, and extending from the inner portion of the latch **38** and secured thereto or formed integral therewith is a projection **43**.

The numeral **44** indicates a fourth spring member which is connected to a wall **47** of the housing **11** by means of a securing element **45**, and a portion of the spring member **44** is arranged in engagement with a pin or screw **46**, while the other end of the spring member **44** is arranged in engagement with the projection **43** on the latch **38**.

From the foregoing, it is apparent that there has been provided a lock which is an improvement on a lock such as a lock of the Segal type. It will be seen that according to the present invention, a Segal double bolt double hasp safety lock has been converted to a snap lock which cannot be forced open by any instrument.

According to the present invention, the original lock has a sliding member that carries two cylindrical bars **24** which when engaged with the hasp **19** on the door frame, forms a double lock, with the ends of the bars **24** hidden within the engaging section of the lock itself. The usual lock has a double pawl arrangement operated by the turning key member or an inside knob which serves to lock the sliding member in both the locked and unlocked positions. Thus, turning of the key member or the knob serves to disengage the pawl and due to projections on the sliding member **23**, the sliding member was caused to move to the locked or unlocked position. This thereby engages or disengages the cylindrical bars **24** into or out of the hasp **19** which is adapted to be mounted on the door frame.

Due to the inconvenience of locking, both from the inside and outside, and due to the possibility of forgetting, such a lock has not had the widespread use which its safety factor warrants.

According to the present invention, the lock is permitted to snap into the locked position, but retains its safety pawl arrangement in the locked position and a new pawl has been provided which is identical with the original except that the unlocked section of the pawl has been smoothed over. Furthermore, the companion member projection on the sliding member has been cut away and a spring has been fastened to the sliding member. Also, a half segment or latch **38** has been pivotally mounted on the pin **40** and fitted into the lower slot **18** where it engages the hasp section **22** on the door frame. Furthermore, studs or posts or pins have been placed in the paths

of both the key turning member and the knob turning member so that neither will travel past the position of complete unlock.

Thus, when the door is locked, the hasp section 22 will have pushed the half segment or latch 38 out of the protruding part of the lock and back into the lock itself on its pivot. When the lock is unlocked, by either a key or knob, the locking pawl is disengaged, and the sliding member 23 moves to the unlocked position against its spring so as to draw with it the two cylindrical bars 24 until it is stopped by the stud or post in its maximum unlocked position. Then, when the door is pushed open and the protruding section begins to disengage the hasp, the half segment 38 under its spring tension 44, follows closely the lower of the two hasps and fills completely the aperture into which that hasp had fitted and through which the lower bolt had passed. Thus, it will fall into position under the butt end of the lower cylindrical bar so as to hold the lock in its unlocked position.

It is to be noted that when the door is closed, the half segment 38 is pushed out against its spring 44 by the lower hasp section and on its pivot 40 back into the lock. The door is then locked and the lock is held in that condition by its safety pawl.

It is to be understood that the lock 10 is adapted to be provided with the usual appurtenances such as a back cover, and according to the present invention, a Segal lock has been provided with the spring 44 as well as the locking latch 38. The spring forces the lock to close, so that it is not necessary to use a key to lock the device. Due to the provision of the spring inside of the lock, the lock will snap closed as previously described. The spring 44 serves to force the lock to close.

It is well known that burglars and prowlers are often able to break into homes, apartments, or other buildings, and with the lock of the present invention such unauthorized entering will be minimized or prevented. The lock cannot be opened by unauthorized persons so that burglars, robbers, or the like will be foiled and the lock is practically foolproof.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

I claim:

In a lock, a hollow housing comprising a back wall and and outer wall member, first, second and third spaced parallel fingers extending from an end of said housing and defining therebetween spaced parallel slots, a hasp

including a mounting plate and a plurality of spaced parallel lugs, one of said spaced parallel lugs adapted to project into the slot between the first and second fingers, and another of said spaced parallel lugs adapted to project into the slot between the second and third fingers, said first and second fingers being hollow, said third finger including a half hollow portion and a half filled in portion so as to provide a latch seat, a base slidably arranged in said housing and said base having a shoulder thereon, a pair of aligned cylindrical bars carried by said base, one of said pair of bars being mounted for movement into and out of the said first finger, and the other of said pair of bars being mounted for movement into and out of said second finger, an inclined lip on said base, a bushing rotatably connected to said back wall, a pair of diametrically opposed teeth connected to said bushing and adapted to engage the lip on said base, a stop pin for limiting rotation of the teeth in one direction, a first spring member positioned in said housing and adapted to engage said bushing, a second spring member having an end portion thereof arranged in engagement with said base, a lever pivotally connected to said base, said lever having a flange, a third spring member arranged adjacent to said lever and base and said third spring member having one end engaging said flange and its other end engaging the shoulder on said base, a sector shaped latch movably mounted between said second and third fingers, said latch adapted to retain said pair of cylindrical bars in said first and second fingers, said lug which projects through the slot between the second and third fingers adapted to engage the latch to move it to a position releasing the bars, there being an opening in said latch for the projection therethrough of a pivot pin, said latch being shaped to provide an arcuate surface which defines a shoulder, a projection extending from the inner portion of said latch, and a fourth spring member connected to a wall of said housing and said fourth spring member having an end portion arranged in engagement with the projection of said latch for normally urging said latch into a locking position.

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