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M. BERK

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CABINET LOCKING DEVICE

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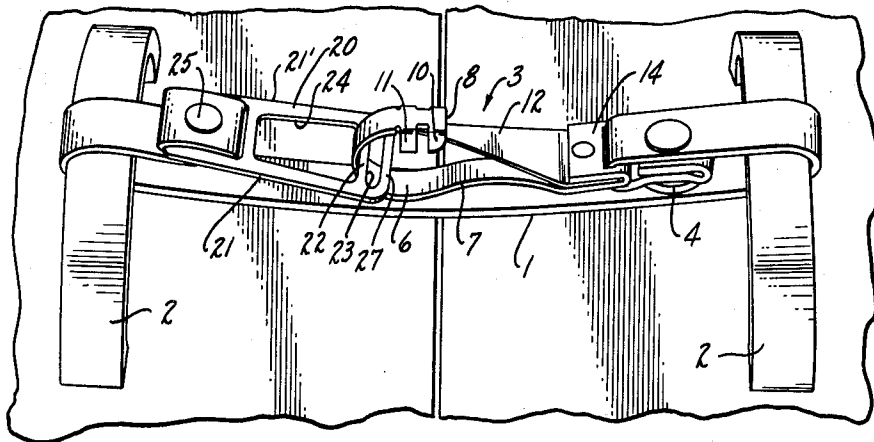


fig. 1.

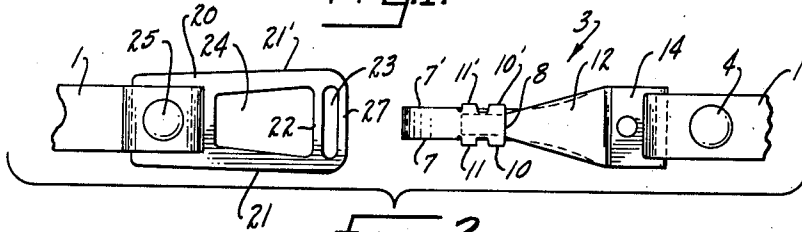


fig. 2.

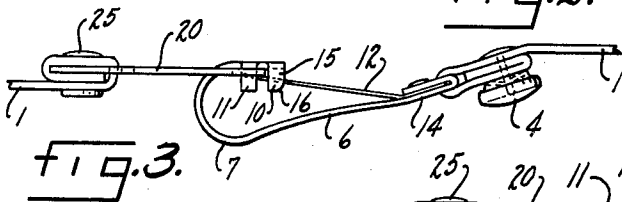


fig. 3.

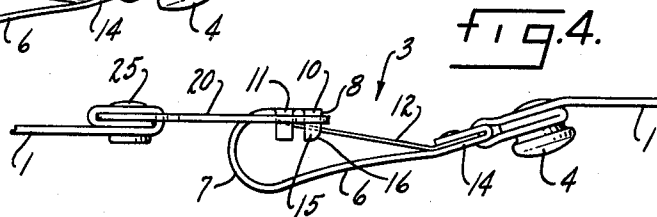


fig. 4.

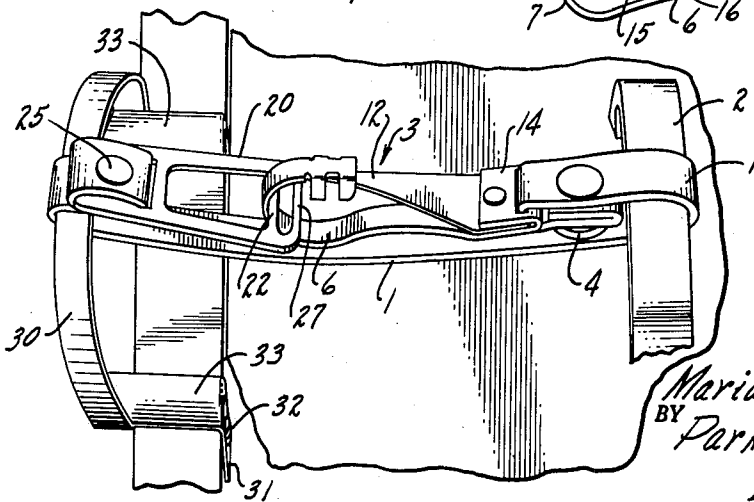


fig. 5.

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CABINET LOCKING DEVICE

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8 Claims. (Cl. 292-288)

This invention relates to a safety locking device. In particular, a device adapted to make it difficult for children of tender years to obtain access to kitchen cabinets and the like. This invention also relates to an improved snap hook and lock engaging unit.

A primary purpose of my invention is to provide a safety locking device which is adapted for securing the doors of kitchen cabinets and like containers so that the contents are kept away from the reach of young children.

Another purpose of this invention is to provide a safety snap hook and lock engaging unit which can be easily and quickly locked and unlocked by an adult but which is unlocked with great difficulty by younger children and is virtually impossible to unlock by children of tender years.

A still further object of my invention is to provide a safety locking device that is quickly adjusted to operatively secure cabinet doors with facility.

It is still another object of my invention to provide a safety locking device that can be assembled for operation with auxiliary retaining handles.

It is yet another object of my invention to provide a locking unit having improved snap hook elements and an improved locking means element for said snap hook.

I have accomplished the foregoing objects and other objects which will be apparent by providing an improved lock engaging unit secured to one end of a tape of adjustable length and an improved snap hook at the other end of said tape. My improved device operates by using the tape to encircle retaining handles or knobs located on each side of the opening juncture of cabinet doors to prevent said doors from being swung to an open position. The tape is secured by means of the improved snap hook and lock engaging unit. My invention is usefully adaptable to existing cabinet doors having fixed handles or knobs thereon in any spaced positions; it is further useful in that it is adapted to operate with an auxiliary retaining handle that can be placed in operating position on cabinet doors not equipped with such retaining handles, or to be utilized as the second handle in single-doored structures.

The safety locking unit will be understood by reference to the attached drawings wherein:

FIGURE 1 is a perspective view of the safety locking device in locked engagement,

FIGURE 2 is a separated top plan view of the snap hook unit and the lock engaging unit,

FIGURE 3 is a side elevation view of the snap hook unit in locking engagement showing one of the safety features in operation,

FIGURE 4 is another side elevation view showing the second safety feature of the snap hook in operation,

FIGURE 5 is a perspective view of the safety locking apparatus made operational by an auxiliary retaining handle.

FIGURE 1 shows the tape generally designated as 1 secured to a pair of handles 2. Secured to one end of the tape is the snap hook unit generally designated as 3. The snap hook 3 is affixed to the tape 1 by inserting one

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end of the tape 1 through slotted means in the body of the snap hook, folding the tape back upon itself and securing the tape by a snap means 4 which is described hereinafter in greater detail.

5 The snap hook unit illustrated in FIGURE 1 has a curved body section 6, side edges 7 and 7', a terminal edge 8 and an end portion 14. Immediately adjacent said terminal edge 8 is a forward depending member 10 spaced from a rearward depending member 11. FIGURE 1 shows said spaced forward and rearward depending members 10 and 11 only on one side edge 7, but the opposite side edge 7' also has a pair of corresponding depending members 10' and 11', aligned directly opposite from depending members 10 and 11. This is best indicated in the top plan view of the snap hook unit in FIGURE 2. The foregoing spaced depending members can be positioned a short distance from the terminal edge 8 but should be proximate thereto.

15 At the end portion 14 of the snap hook 3 is secured one end of a spring bar 12. The spring bar 12 extends in spring action relationship against the curved body section 6 and terminates between the depending members 10, 10' and 11, 11'. The spring bar 12 preferably extends as far as the rearward depending members 11 and 11', but the bar 12 can operatively extend beyond this point. The illustrated spring bar 12 has a broad base at the point where it is secured to the end portion 14 of the curved body section 6 and it is then tapered to a width corresponding closely to the inner width of the curved body section 6 between the depending members 10, 10' and 11, 11'. Such a tapered spring bar 12 exerts a strong spring action relationship against the curved body section 6.

20 The end of the tape 1 having the snap hook unit 3 secured thereto comprises one terminal end of the tape of adjustable length. The other terminal end has secured thereto a lock engaging unit generally designated herein as locking ring 20 consisting of a plane continuous band having two substantially parallel members 21 and 21' joined by a vertical member 27. The locking ring 20 is divided by a single member 22 to define a forward clearway 23 of smaller size and a rearward clearway 24 of larger size. The unit 20 is shown preferably secured to the tape 1 by permanent rivet means 25.

25 The unit is locked by placing locking ring 20 in pressing action against the spring bar 12 so that the rearward clearway 24 passes below the depending members 10, 10' and 11, 11' into resting position as shown in FIGURES 1 and 5. The face 15 of each forward depending member 10 is preferably defined by an inward arc 16 to form an inwardly curved profile. This inwardly curved profile of the forward depending members 10 and 10' facilitates the locking operation because it allows the vertical member 27 of the locking ring 20 to pass more easily between the forward depending members 10 and 10' and the spring bar 12.

30 It is apparent that the unit can be easily and quickly locked by an adult by merely performing the foregoing locking engagement. It will also be apparent that once the unit is locked, it is virtually impossible for a child of tender years (e.g., 5 years or less) to withdraw the locking ring 20 from out of the snap hook unit 3. In any attempt to unlock the units, the child of tender years must perform several difficult manual operations. The child must depress the spring bar 12 by a pressing action

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with the thumb while simultaneously exerting a counter pressure with the forefinger against the curved body section 6. At the same time, the child is forced to use the other hand to manipulate the locking ring because both hands are required to disengage the locking device. This manual muscular performance is extremely difficult for a child of tender years; however, if the child succeeds in depressing the spring bar 12 below the clearance of the depending members 10 and 10', it is still necessary to clear the locking ring 20 past the depending members so that the forward clearway 23 bypasses the depending members 11 and 11'. There are several safety features of the unit which make it highly unlikely that this maneuver will be successful. The first safety device is the length of the depending members 10, 10' and 11, 11' which extend to a point which makes it additionally difficult to perform the action. The spring bar 12 must be depressed to a far greater degree than just merely freeing it from contact with the inner wall of the curved body section 7. The body section 7 is curved inward in such a manner as to offer ease of operation for an adult who can exert pressure along the length or across body section 7 and spring bar 12. Yet body section 7 and spring bar 12 are designed to be operationally difficult for a child due to the size and length of a child's fingers. If the child succeeds in passing the unit 20 past the first pair of rearward depending members 11 and 11', such depending members will immediately pass in close association through the forward clearway 23 to lock the unit as shown in FIGURE 3. If, perchance, the child succeeds in passing the unit beyond the rearward pair of depending members 11 and 11', then the forward clearway 23 will be caught by the forward pair of depending members 10 and 10', as shown in FIGURE 4.

A further advantage of the safety locking unit is that it is adaptable to any cabinet door arrangement. The length of the tape can be adjusted to accommodate any distance which separates retaining handles or knobs. This is accomplished by providing adjustable means on the tape 1 so that a desired length can be attained for snugly encircling the retaining handles or supporting shafts of knobs to gap the distance therebetween. The embodiment selected for illustration herein will be best seen in FIGURE 3. The tape 1 is passed through the snap hook unit 3 at slotted means and turned back upon itself. The tape is secured by a tack and receptacle unit 4 shown completely assembled in FIGURE 3. The non-assembled unit (not shown) consists of a tack and receptacle arrangement, as shown by the dotted outline in FIGURE 3. The tack is permanently fixed through a spacing of lesser diameter formed by annular converging shelves in the receptacle (indicated in FIGURE 3 by dotted lines in the side view). A threaded recess in the tack is caught by the shelves and retained in locked position. Therefore, once the desired length of the tape is determined, the tack is merely pushed through the folded tape by a slight pressure and locked to the other half of the receptacle unit.

In particular cabinet door arrangements wherein only one retaining handle is found, an auxiliary retaining handle serves to make the locking unit operable. This auxiliary retaining handle generally designated as 30 is shown joined to two flat metal arms 33 located in the same plane. Each arm 33 has a right angle member 31 contiguous therewith, which right angle member 31 is secured to the inside of a cabinet door or drawer by one or a plurality of screws 32. It is thus seen that this auxiliary handle 30 can be affixed with ease and speed to make the safety locking unit operable on doors having only one retaining handle. In cabinet doors that have no arcuate handles of the type shown for retaining the tape, the auxiliary handle also serves to make the locking unit operable. In such a case, a similar auxiliary handle 30 is affixed to the inside face of the door or that face which lies in flush engagement with the doorsill of

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the cabinet. The arrangement of this second auxiliary handle is not shown but its function can be readily understood by noting how the auxiliary handle 30 is affixed to the inside of the doorsill in the previous description. A like auxiliary handle in like manner is attached to the inside of the door cabinet, and a tape, shortened to the desired length, is retained by the handles in accordance with the teaching of the foregoing description.

The description of the invention has presented an embodiment wherein a pair of forward and a pair of rearward depending members are adapted to coact with a locking ring having a smaller clearway to receive a pair of said depending members in close association. It is to be understood that the teaching of this invention encompasses embodiments having a plurality of paired depending members coacting with a plurality of succeeding clearways in a lock engaging ring.

The foregoing invention can now be practiced by those skilled in the art. Such skilled persons will know that the invention is not necessarily restricted to the particular embodiments presented herein. The scope of the invention is to be defined by the terms of the following claims as given meaning by the preceding description.

I claim:

1. A safety snap hook assembly comprising a curved body section having an end portion, side edges, a terminal edge, a spring bar fixed to the end portion and extending in spring action relationship against the terminal edge, at least one member depending from the curved body section at a side edge and proximate to the terminal edge, a locking unit having a rearward clearway to receive the curved body section when the spring bar is depressed, and a forward clearway dimensioned to permit close passage therethrough of the depending member.

2. The snap hook assembly of claim 1 further characterized by and including a plurality of members depending from the curved body section of each side edge.

3. The snap hook assembly of claim 1 further characterized in that a first pair of opposed members depend from the curved body section at each side edge and, spaced therefrom, a second pair of opposed members depending from the curved body section at each side edge.

4. The snap hook assembly of claim 1 further characterized by and including a tape of adjustable length having one end joined to the locking unit and the other end joined to the snap hook.

5. The snap hook assembly of claim 1 further characterized in that the locking unit has a flat body section having a rearward clearway and a forward clearway.

6. A safety snap hook assembly comprising a curved body section having an end portion, side edges, a terminal edge, a spring bar fixed to the end portion and extending in spring action relationship against the terminal edge, a plurality of spaced members depending from each side edge proximate to the terminal edge, a locking unit having a rearward clearway to receive the curved body section when the spring bar is depressed and a forward clearway dimensioned to permit close passage therethrough of a depending member on each side edge.

7. A safety snap hook assembly comprising a curved body section having an end portion, side edges, a terminal edge, a spring bar fixed to the end portion and extending in spring action relationship against the terminal edge, a first pair of opposed members depending from the curved body section at the side edges and proximate to the terminal edge, a second pair of members spaced therefrom and depending from the curved body section at the side edges, a locking unit having a rearward clearway to receive the curved body section when the spring bar is depressed, and a forward clearway dimensioned to permit close passage therethrough of the first pair of depending members.

8. A safety locking assembly adapted to make it difficult for children of tender years to obtain access to kitchen cabinets and the like which comprises, in combi-

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nation, a tape of adjustable length to snugly encircle retaining handles, said tape having joined to one end a snap hook having a curved body section with an end portion, side edges, a terminal edge, a spring bar fixed to the end portion and extending in spring action relationship against the terminal edge, a plurality of spaced members depending from the curved body section at the side edges and proximate to the terminal edge, the other end of said tape having joined thereto a locking unit having a rearward clearway to receive the curved body section when the spring bar is depressed and a forward clearway dimensioned to permit a close passage

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therethrough of a member at each side edge of the curved body section.

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