Nov. 17, 1964 R. L. RAYE 3,157,040

LOCKING DEVICE

Filed May 29, 1962

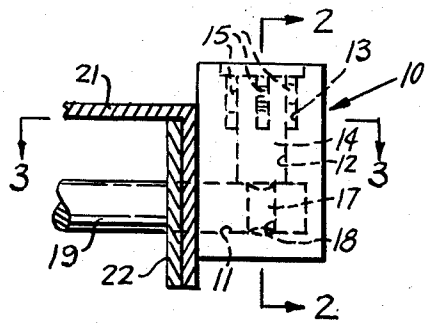


FIG. 1

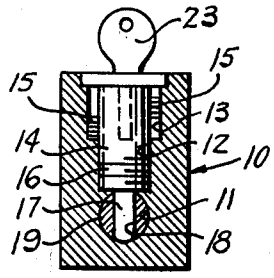


FIG. 2

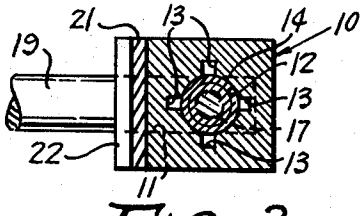


FIG. 3

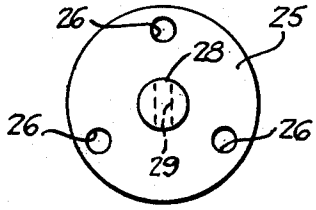


FIG. 6

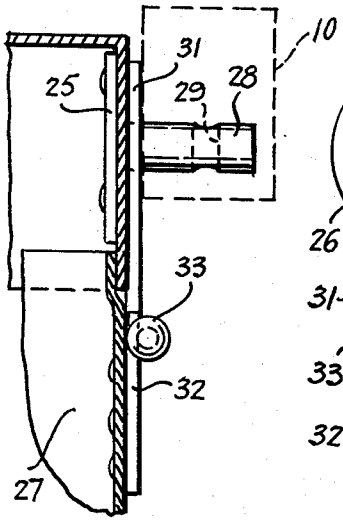


FIG. 7

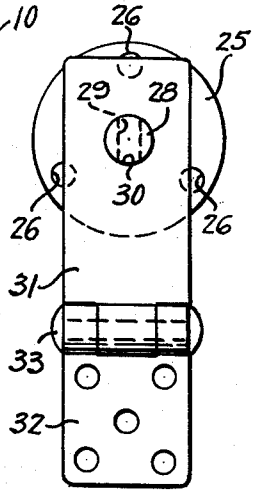


FIG. 8

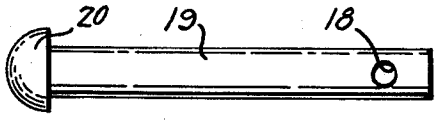


FIG. 4

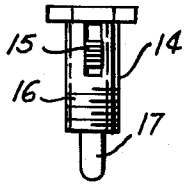


FIG. 5

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LOCKING DEVICE

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3 Claims. (Cl. 70—57)

This invention relates to a locking device and has particular applicability to a lock to be employed with any receptacle containing valuables, such as a vending machine, a lock box or the like.

A primary object of this invention is the provision of an improved substantially theft proof lock which incorporates means whereby exertion of force against the lock and its associated housing is exerted, and if the lock is ruptured, the stud or retaining pin will remain in position to prevent the opening of the receptacle.

A further object of this invention constitutes an improvement over my prior Patent No. 2,996,909, dated August 22, 1961, entitled "Locking Device" in that in the previous patent an annular groove about the end of the bar was employed, whereas in the instant invention the bore extends entirely through the bar, and a stud or pin engaging in said bar positively precludes removal of the bar or stud.

A further object of the invention is the provision of a device of this character which, when employed with a yoke and clevis surrounding a box, prevents the opening of the box upon breaking of the lock, since the locking pin is retained in engagement with the opening in the bar, to prevent disassembly of the yoke and clevis.

A further object of the invention is the provision of a device of this character which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble, and utilize.

Other objects will in part be obvious and in part be pointed out hereinafter and shown in the accompanying drawings wherein:

FIGURE 1 is a fragmentary view partially in section and partially in elevation showing the locking device of the instant invention as applied to a yoke and clevis adapted to surround the box.

FIGURE 2 is a sectional view taken substantially along the line 2—2 of FIGURE 1 as viewed in the direction indicated by the arrows.

FIGURE 3 is a sectional view taken substantially along the line 3—3 of FIGURE 1 as viewed in the direction indicated by the arrows.

FIGURE 4 is a view of a bolt or bar disassembled from its associated mechanism.

FIGURE 5 is a plan view of a locking plug removed from its associated block and bar.

FIGURE 6 is an end elevational view of a stud, which may be positioned interiorly of a box or receptacle or the like, and to which the locking device comprising a part of the instant invention may be applied.

FIGURE 7 is a side elevational view of the device of the instant invention in operative position, the locking block being shown in dotted lines; and

FIGURE 8 is a plan view of the structure of FIGURE 7 before the application of a locking block or a similar locking device.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having reference now to the drawings in detail, there

is generally indicated in FIGURE 1 a locking block **10**, having a transverse bore. The vertical bore **12** is provided with radial slots **13**, and has positioned therein a threaded plug **14** which includes a lock and tumblers which extend tumblers **15** into slots **13** to prevent rotation of the plug. The lower end of the plug is threaded as at **16**, and engages corresponding threads in bore **12**. Obviously, after the tumblers **15** are extended, the plug cannot be unthreaded from its associated block.

The lower end of the plug **14** is provided with a stud **17** which engages in a transverse opening or bore **18** in a locking bar **19**. The locking bar **19** is best shown in FIGURE 4, and includes a head **20**, which may be extended through aligned openings in a clevis **21** and a yoke **22** positioned about a vending machine, a strong box, or other like receptacle. In the employment of the device it will be obvious that when the key **23** is turned to extend tumblers **15**, after threading the threaded end **16** of plug **14** itno the threaded lower end of bore **12**, that rotation of the plug will be impossible. Due to the engagement of stud **17** in opening **18** it will similarly be seen that bar **19** cannot be withdrawn.

A modified form of construction is disclosed in FIGURES 6, 7, and 8 wherein a flat plate **25** provided with screw openings **26** is adapted to be positioned interiorly or exteriorly of a box or other receptacle **27** and secured to the inner side thereof. A central stud **28** projects from the plate **25** and is provided with a bore **29** which engages through an opening **30** in the hasp **31** of a lock plate **32** hinged as at **33**, and is adapted for the reception of a lock block **10** in the identical manner of the previously disclosed modification.

From the foregoing it will now be seen that there is herein provided a device which accomplishes all the objects of this invention and others including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative, and not in a limiting sense.

I claim:

1. In a device for locking a first member to a second member, a locking bar having two end portions, one of said end portions bearing against said first member, the other of said end portions passing through an aperture in said first member and extending outwardly therefrom, portions of said locking bar defining a transverse bore therethrough adjacent said other end portion thereof and spaced from said first member, an element connected to said second member and having an aperture passing over said other end portion of said locking bar whereby said element is received between said first member and said bore, and locking means operatively engaged through said bore, said locking means comprising a lock block having a second bore therein into which said other end portion of said locking bar extends, and a third bore perpendicular to, and intersecting, said second bore and aligned with said bore in said locking bar, a lock plug in said third bore, said plug having threads on its lower end and corresponding threads in said third bore, a stud on the end of said plug engageable in said bore in said locking bar, and key controlled tumblers extensible from said plug into radial slots in said lock block to preclude

rotation of said plug and hence withdrawal of said stud from said bore in said locking bar.

2. The structure of claim 1 wherein one of said members is a receptacle and the other of said members is a cover therefor, said element comprising a hasp pivotally secured at one end with an aperture in its opposite end for passing over the other end portion of said locking bar.

3. The structure of claim 1 wherein one of said members is a yoke and the other of said members is a clevis, said yoke and clevis having overlapping legs, and said element comprising one of said legs.

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ALBERT H. KAMPE, *Primary Examiner.*