R. E. PERKINS.

LOCKING DEVICE.

APPLICATION FILED MAY 3, 1915.

1,172,482.

Patented Feb. 22, 1916.

Fig. 1

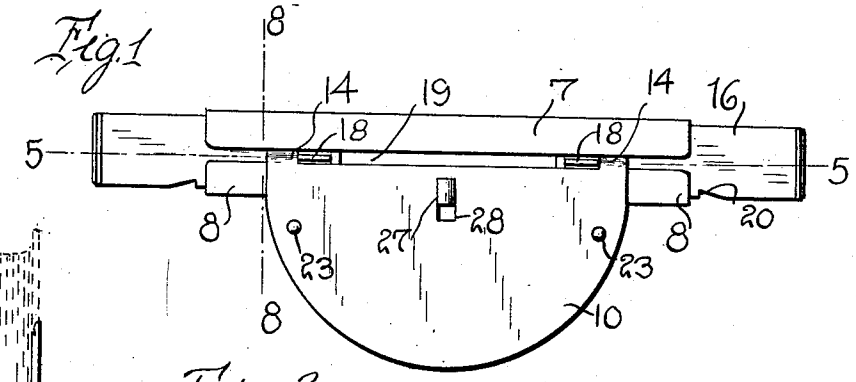


Fig. 2

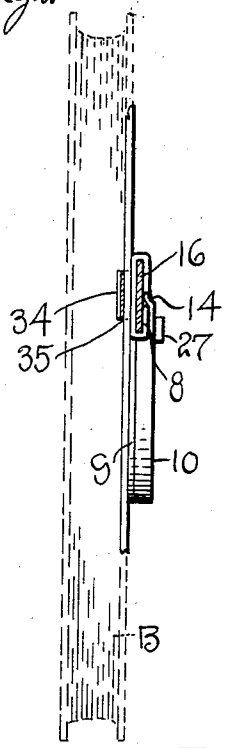


Fig. 3.

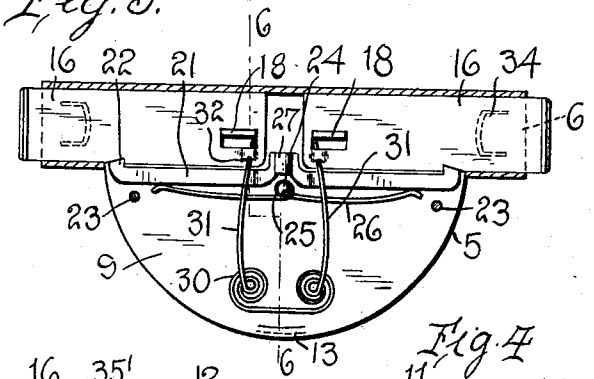


Fig. 4

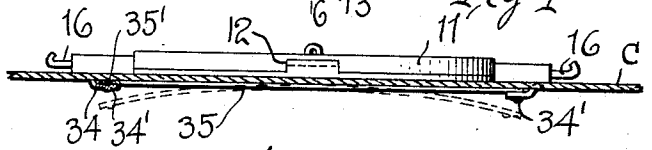


Fig. 5

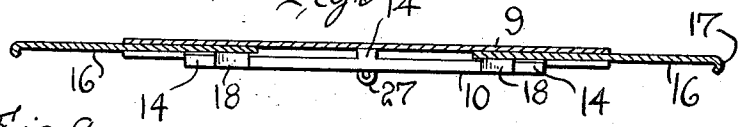


Fig. 9

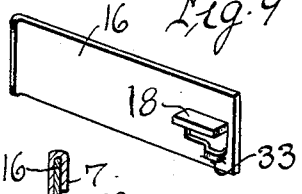
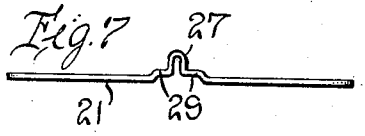


Fig. 7



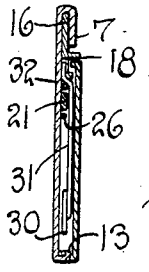
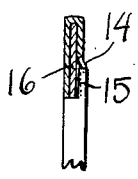


Fig. 6

Fig. 8



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LOCKING DEVICE.

1,172,482. Specification of Letters Patent. Patented Feb. 22, 1916.

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To all whom it may concern:

Be it known that I, RICHARD E. PERKINS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Locking Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved locking device and has for its primary object to provide a simple, durable and effective means for retaining a memorandum or note book in the pocket and obviating liability of its accidental displacement and loss therefrom.

The invention has for one of its detail objects to provide a device for the above purpose including laterally projected spring pressed locking or holding members mounted within a suitable case, and means for easily, quickly and securely attaching the device to the back of a note or memorandum book.

The invention has for a very important object to provide a simple and durable arrangement of parts whereby the entire locking mechanism is very compactly arranged so that the same will not bulge the pocket but, on the other hand, will occupy but little space.

The invention has for another very important object to provide means for easily releasing the locking or holding members after the book has been placed in the pocket, said members being retracted when the book is inserted so that they will not interfere with the placing of the book within the pocket.

With the above and other objects in view, my invention consists in the novel features of construction, combination, and arrangement of parts to be hereinafter more fully described, claimed, and illustrated in the accompanying drawing, in which,

Figure 1 is a side elevation of my improved locking device, the locking plates or members being shown in their extended positions; Fig. 2 is an edge view of a book partly in section, showing the locking device attached thereto; Fig. 3 is a horizontal sectional view; Fig. 4 is an edge view with the device attached to the book back; Fig. 5 is a section taken on the line 5—5 of Fig. 1; Fig. 6 is a section taken on the line 6—6 of Fig. 3; Fig. 7 is an edge elevation of the keeper member; Fig. 8 is a detail section taken on the line 8—8 of Fig. 1; and Fig. 9 is a detail perspective view of one of the locking members.

Referring in detail to the drawing, 5 designates the body plate of the lock case which is constructed of sheet metal and is provided with lateral extensions, indicated at 6. The longitudinal edge of this body plate is turned or bent over upon itself to produce the guide flange 7 thereon, and upon the opposite longitudinal edges of the extensions 6, the similar inwardly projecting opposed guide flanges 8 are provided. The body plate of the case for the locking mechanism also includes the substantially semi-circular portion, indicated at 9. The cover or face plate 10 for the lock case is also formed from a single sheet of metal and substantially corresponds in plan to the form of the part 9 of the body plate 5. The curved edge of the face plate 10 has a flange 11 formed thereon which is adapted to engage at its edge upon the opposed face of the part 9 of the body plate. In this flange, centrally thereof, a slot 12 is provided to receive an inwardly projecting tongue or lip 13 which is formed upon the edge of the sheet metal plate 5. The longitudinal edge portion of the face plate 10 projects inwardly between the spaced guide flanges 8 on the body plate and the opposite ends of said cover are formed with the extensions 14 which are offset and abut at their ends against the opposed longitudinal edge of the guide flange 7 on the body of the case. It will be observed from reference to Fig. 8, that the extended ends 14 of the cover or face plate also have their outer edges flanged, such flanges constituting a continuation of the flange 11 of the cover, but being appreciably narrower or cut away, as indicated at 15, so that the edges of the flanges will be spaced from the sliding locking plates to be hereinafter referred to. The edge of the keeper plate, between the extensions 14, is also flanged and centrally provided with a spacing lug 14′ for engagement with the face of the body plate.

The locking mechanism includes the relatively slidable locking plates 16 which are arranged between the flanges 7 and 8 and the longitudinal edge portion and extensions 6 of the body plate 5 of the case. The outer ends of these locking plates 16 are curved or bent, as shown at 17, so that they will not

present a sharp edge for engagement with the lining wall of the pocket. Upon their inner ends, said plates are provided with lugs 18 which are cut out of the body of the plate and project outwardly through the space or slot, indicated at 19, which is produced between the spaced longitudinal edges of the guide flange 7 and the face plate 10 of the lock case. The extensions 14 on the end of said face plate act as stops to limit the outward movement of the locking plates. Each of the plates 16 has its lower edge recessed to provide a shoulder 20 thereon. A common keeper bar 21 is provided to hold the plates in their retracted position. This bar is disposed between the body wall and the face plate 10 of the lock case and is provided upon its ends with angularly disposed stop lugs 22 for engagement with the shoulders 20 upon the respective locking plates. The face plate 10 is rigidly secured to the body plate of the lock case by a pair of rivets 23. These rivets are located contiguous to opposite ends of the keeper bar 21 and also serve to limit the movement of said bar in one direction. Upon a pin 24 fixed to the body plate 5 of the case, a central coil 25, formed in a wire spring 26, is engaged. The free ends of this wire spring bear against the keeper bar 21 adjacent to its opposite ends, and normally act to hold the lugs 22 on said bar in engagement with the edges of the locking plates 16. The keeper bar 21 is formed with a suitable finger piece 27 which projects outwardly through an elongated slot 28 in the face plate 10. This keeper bar at the juncture of the finger piece therewith is also provided with shoulders 29 having sliding contact with the inner face of the plate 10 so as to prevent any transverse shifting movement of the keeper with respect to the plates of the case.

For the purpose of projecting the locking plates 16 to their effective positions, I provide a length of resilient wire formed with spaced spiral springs 30 in its medial portion. The ends of this spring wire constitute arms 31, the extremities of which are engaged through openings 32 provided in the inner ends of the respective locking plates 16, said extremities of the arms, after being passed through the openings, being seated in the notches or recesses 33 formed in said locking plates. This actuating means for the locking plates is not attached in any manner to either the body plate 5 of the case or the cover plate 10 thereof, the only attachment of said actuating member being to the movable locking plates, as above stated.

It will be apparent, from the above description, that the entire locking mechanism may be housed within a very confined space. All of the parts are relatively small and the space between the body wall and the cover of the case is approximately one-eighth of an inch. In the accompanying drawing, however, the scale has been somewhat exaggerated for the sake of clearly showing every feature of the invention. By thus compactly arranging the several elements of the lock, the device lends itself admirably to the particular purpose in view, namely, for attachment to a memorandum or note book, whereby the same may be properly held or secured within a coat pocket.

For the above purpose, tongues indicated at 34, are struck out of the extensions 6 on the body wall of the case and are adapted to be engaged through slits formed in the back or cover wall C of the book, indicated at B. After these tongues have been inserted through the slits, a leaf spring 35 is engaged at its extremities between the extremities of said tongues and the cover wall of the book. This spring, in its normal condition, is slightly bowed or curved longitudinally so that the ends thereof must be sprung inwardly under the lugs 34. For the purpose of retaining the spring in position, the ends of the spring are formed with projections 35′ to engage in sockets 34′ in the lugs 34. The spring tending to return to its normal condition will thus act to securely clamp the lock case against the opposite edges of the book cover. Such attaching means permits the user to very easily and quickly attach the locking device to a cover of the book or remove the same therefrom.

Having now fully described the several structural features of my invention, its operation will be understood as follows: When the book is placed within the pocket, the locking plates 16 are forced inwardly so that the spring 26, acting against the keeper bar 21, will engage the terminal lugs 22 on said bar with the shoulders 20 on the locking plates and retain the plates in retracted position. The book may now be readily inserted or placed within the pocket and the operator then forces downwardly upon the finger piece 27 thereby moving the keeper bar 21 against the action of the spring 26 to release the locking plates. The arms 31 of the resilient wire, under the action of the spiral springs 30, will then immediately act to project said locking plates outwardly, thus causing the rounded or curved outer ends 17 thereof to engage with the lining wall of the pocket at opposite sides of the same. The book will, in this manner, be very securely held or retained in the pocket and will not be displaced by the wearer of the coat assuming various postures which would, under ordinary circumstances, cause the book to slide from the pocket. Neither will the book be released when the coat is carelessly handled or the wearer is running, but will be, at all times, positively retained within the pocket against liability of displacement and loss. However, when it is

desired to remove the book, the outer ends of the plates 16 are engaged between the thumb and fore-finger from the exterior of the pocket and forced inwardly until the lugs 22 on the ends of the keeper bar again engage with the shoulders 20 and hold the plates in their retracted positions.

From the foregoing description, taken in connection with the accompanying drawing, it will be seen that I have produced a very simple, effective and convenient locking device for memorandum books and the like which, owing to its condensed form, will not bulge the pocket or in any way detract from the appearance of the wearer when the device is in use. It will, therefore, be apparent that, in view of the very simple form and construction of the several elements employed, the locking attachment can be manufactured at comparatively small cost.

While I have shown and described the preferred construction and arrangement of the several parts, it is to be borne in mind that the invention is susceptible of considerable modification therein and I, therefore, reserve the privilege of resorting to all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus fully described my invention, what I desire to claim and secure by Letters Patent is:—

1. A locking device of the character described comprising a flat sheet metal case, longitudinally slidable locking plates mounted in said case, means arranged between the walls of the case normally acting to project the locking plates to their effective position, a manually shiftable keeper member mounted within the case to retain the plates in retracted position, means for attaching said locking case to a book cover whereby, when the plates are released, the same will be projected into bearing engagement at their outer ends with the walls of the pocket to retain the book therein.

2. A lock of the character described including a casing having a rectangular guideway integrally formed therewith and a slot communicating with one side of the guideway, longitudinally slidable locking plates mounted in said guideway, means arranged within the case and connected to the opposed ends of the plates to normally urge the same outwardly in opposite directions to their effective locking positions, and a manually shiftable keeper member common to both locking plates to hold the same in a retracted position.

3. In a locking device of the character described comprising a flat sheet metal case, a pair of locking plates mounted in said case for sliding movement, a common operating member loosely mounted between the walls of the case and attached at its extremities to the opposed ends of the respective plates and normally acting to project said plates outwardly in relatively opposed directions, a spring pressed manually operable keeper member mounted within the case to coöperate with the plates and hold the same in their retracted positions, said keeper member having a central finger piece projecting outwardly through one wall of the case.

4. In a lock of the character described, a sheet metal case, slidable locking plates mounted in the case and provided with stop lugs on their inner ends, a common resilient operating member for said plates connected at its extremities to the inner opposed ends of the plates, a common keeper member for the plates mounted within the case and movable at right angles to the line of movement of the locking plates, a spring normally holding the keeper in engagement with said plates to hold the same in their retracted positions, said keeper being provided with a central finger piece projecting outwardly through one wall of the case.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

RICHARD E. PERKINS.

Witnesses:

M. CARLISLE LYDDANE,

JOHN L. FLETCHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."