May 9, 1950 F. TEASDALE 2,506,846

BOOK LOCK

Filed May 28, 1948 2 Sheets-Sheet 1

Fig. 1.

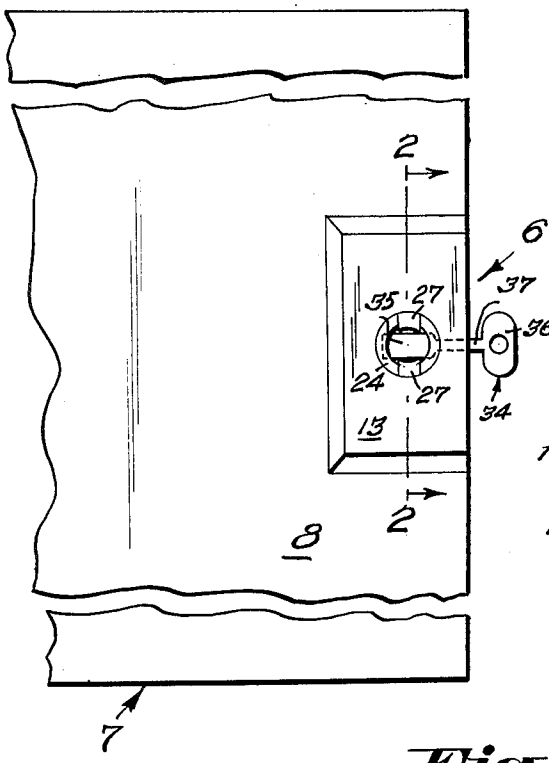


Fig. 3.

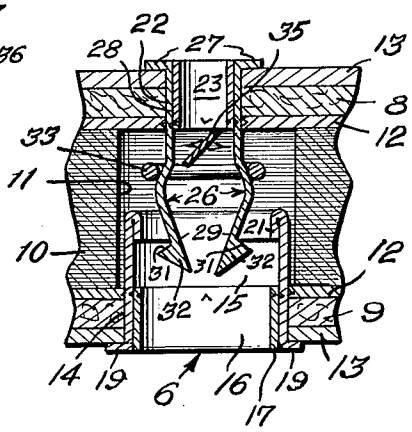
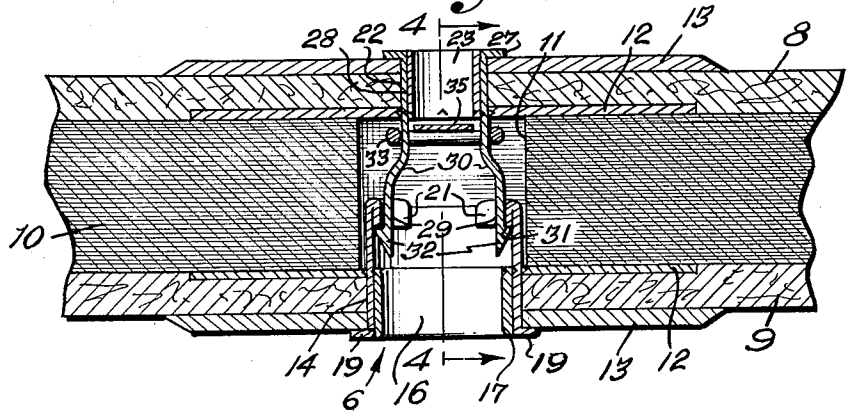


Fig. 2.



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May 9, 1950 F. TEASDALE 2,506,846

BOOK LOCK

Filed May 28, 1948 2 Sheets-Sheet 2

Fig. 4.

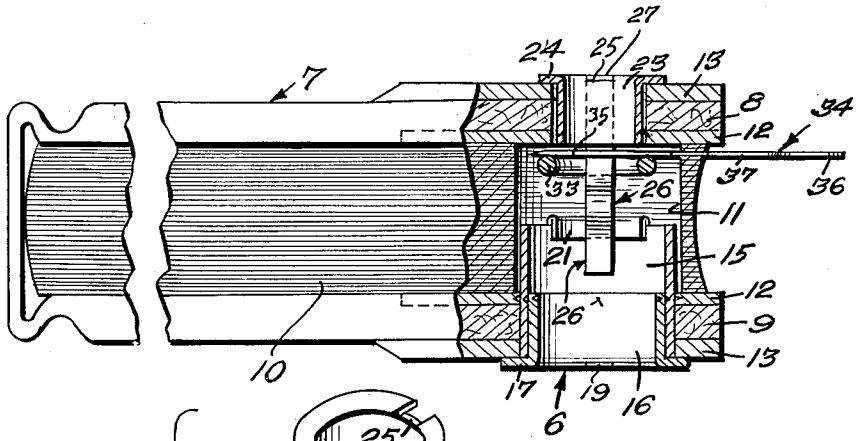
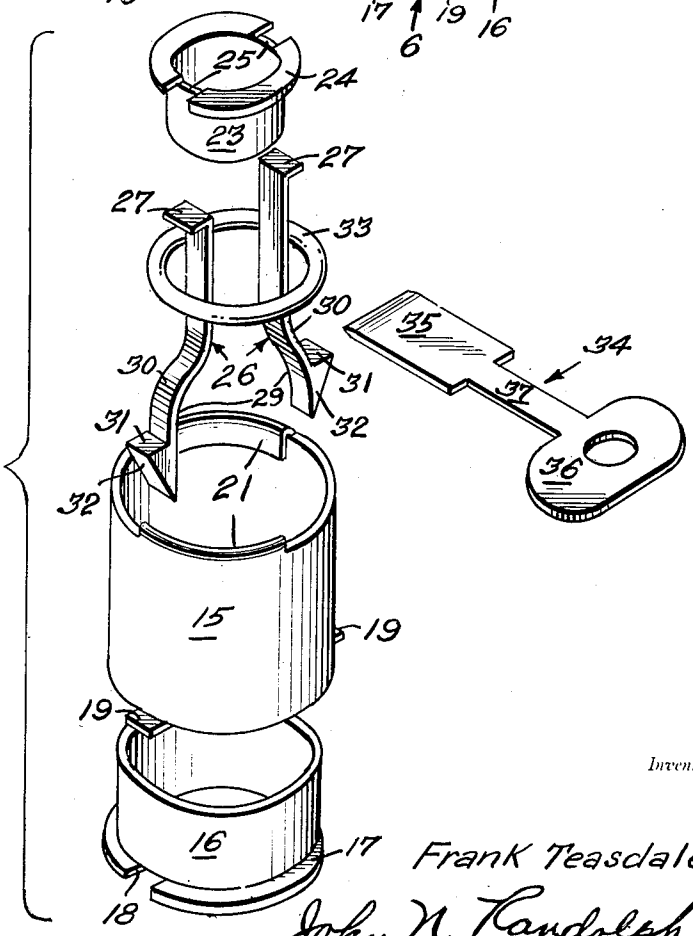


Fig. 5.



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BOOK LOCK

Frank Teasdale, Chandler, Ariz.

Application May 28, 1948, Serial No. 29,817

6 Claims. (Cl. 70—58)

1

This invention relates to a novel lock especially adapted for books such as diaries but which may also be utilized for locking larger books, brief cases or the like.

The primary object of the present invention is to provide a lock of extremely simple construction which will be substantially concealed by the book or other item in which it is mounted so that the means for unlocking the lock, even with the key available, will not be readily apparent.

Still a further object of the invention is to provide a novel lock which will be substantially concealed when in a locked position thereby eliminating the need for all externally disposed locks or other devices to prevent opening of a book.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a preferred embodiment thereof, and wherein:

Figure 1 is a plan view showing a portion of a book with the lock applied thereto and with the key inserted preparatory to unlocking the lock;

Figure 2 is an enlarged sectional view taken substantially along a plane as indicated by the line 2—2 of Figure 1;

Figure 3 is a view similar to Figure 2 but showing the key in a turned position for releasing the lock;

Figure 4 is a sectional view taken substantially along a plane as indicated by the line 4—4 of Figure 2, and

Figure 5 is an enlarged, exploded perspective view of the various parts constituting the lock, including the key.

Referring more specifically to the drawings, for the purpose of illustrating one preferred embodiment and use of the novel lock constituting the invention and designated generally 6, a book, designated generally 7 is illustrated fragmentarily in the drawings including the book covers 8 and 9 and the leaves of the book 10 which are provided with registering openings adjacent the open edge of the book forming a bore or opening 11 through the leaves 10, when the book 7 is in a closed position.

The lock 6 preferably includes complementary inner and outer cover plates 12 and 13 which are secured to the inner and outer sides of the covers 8 and 9, contiguous with the bore 11. The plates 12 and 13 are attached to the cover 9 and said plates and cover are provided with relatively large registering openings 14 which register

2

with the bore 11 for receiving a sleeve 15 which extends inwardly therefrom and part way through the bore 11 when the book 7 is in a closed position. A collar 16 is disposed within the outer portion of the sleeve 15 and is provided with an outturned flange 17 at its outer end which overlies a portion of the outer plate 13 of the cover 9 and which is provided with spaced notches 18, as best seen in Figure 5, for receiving projections 19 on the outer end of the sleeve 15 for keying the sleeve and collar together. The collar 16 and the sleeve 15 are preferably connected to one another and to the inner plate 12 by a press fit connection. The inner end of the sleeve 15 is provided with circumferentially spaced internal folds or turned back portion 21, for a purpose which will hereinafter become apparent.

The plates 12 and 13, connected to cover 8, and said covers are provided with registering openings of a smaller diameter than that of the openings 14 and which are designated 22 and which are preferably disposed coaxial with the openings 14 for receiving a collar 23 which extends loosely therethrough and which is provided at its outer end with an outturned flange 24, provided with diametrically opposed notches 25. A pair of spring fingers, each designated generally 26 have outer ends or shank portions which extend through the openings 22 externally of the collar 23 and which are provided with outturned terminals 27 which fit into the notches 25 and against the outer plate 13 of the cover 8. The spring fingers 26 are preferably press fit to the collar 23 and inner plate 12 as seen at 28 and are thereby nonrotatably connected to said cover 8. The shank portions of the spring fingers 26 are substantially straight from the terminals 27 to a point inwardly of the inner plate 12 of cover 8 and are provided therebeyond with outwardly offset portions 29 connected to said first mentioned, shank portions by outwardly bowed portions 30. The terminals of the substantially straight free end portions 29 are provided on their outer sides with enlargements forming inwardly facing shoulders 31 and cam surfaces 32 which converge from the outer edges of the shoulders 31 to merge with the inner sides of said portions 29 at the terminals thereof, as best illustrated in Figure 5. A ring 33 is loosely disposed on the shank portions of the spring fingers 26 between the plate 12 of the cover 8 and the outwardly bowed portions 30 of said fingers 26.

A key, designated generally 34, which is rela-

tively flat, is provided with a relatively wide blade 35 at one end thereof, a handle 36 at its opposite end and a restricted shank 37 connecting the blade and handle.

To lock the book 7 the covers 8 and 9 are swung toward one another and in so moving the spring fingers 26 will approach the rounded outer edges of the turned back portions 21 of the sleeve 15 and said rounded edges will engage the cam surfaces 32 of the spring fingers for camming said fingers inwardly from their normal positions, as illustrated in Figure 2 and so that the shoulders 31 may move downwardly to below the inner edges of the turned back portions 21 so that when said shoulders clear the portions 21 the normal resiliency of the spring fingers 26 will cause them to be projected outwardly so that the shoulders 31 will engage under the turned back portions 21, as seen in Figure 2, for locking the book 7 in a closed position. The lock 6 is of a sufficient length so that the leaves 10 are loosely disposed to enable the tapered leading edge of the blade 35 of key 34 to be inserted between two of said leaves and adjacent the cover 8 so that the blade 35 can enter the bore 11, transversely thereof and move between the spring fingers 26 and between the ring 33 and the inner plate 12 of the cover 8 so that by rotating the key 34 on its longitudinal axis in either direction from its position of Figure 2 to its position of Figure 3, the ring 33 will be displaced downwardly and into camming engagement with the outwardly bowed finger portions 30 for retracting the free ends 29 of the fingers 26, as illustrated in Figure 3, to disengage the shoulders 31 from the inturned sleeve portions 21 to thereby unlock the book 7.

It will be readily apparent that the outer ends of the collars 16 and 23 could be closed or the outer end portions of the lock could be imbedded in the covers 8 and 9 so that the lock 6 would be completely concealed when the book 7 was closed and locked.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A book lock comprising a sleeve member adapted to be anchored to a cover of a book and to extend inwardly therefrom into a bore formed by registering openings in the book pages, said sleeve having internal enlargements adjacent its inner end, a pair of spring fingers having corresponding ends adapted to be anchored to the other book cover and to extend inwardly therefrom for movement into the bore formed by the page openings, said spring fingers having external enlargements at their free ends forming shoulders for engaging under the internal enlargements of the sleeve for detachably locking the sleeve to the spring fingers for holding the book in a closed position, and cam means slidably engaging the spring fingers and adapted to be actuated by a key for retracting the spring fingers toward one another for disengaging said shoulders from the sleeve enlargements, said cam means being slidably supported solely by the spring fingers and being located, in entirety, between the anchored ends and the free ends of said spring fingers so as to render said cam means inaccessible, except by means of said key, when said lock is mounted on said book and in locking position.

2. A book lock as in claim 1, said spring fingers having outwardly bowed portions adjacent their free ends, said cam means comprising a ring loosely disposed on the spring fingers between said outwardly bowed portions and the last mentioned cover.

3. A book lock adapted to be secured to a book having pages provided with aligned openings forming a bore extending therethrough, comprising a rigid lock element adapted to be anchored to one cover of the book and extending into one end of said bore and provided adjacent its inner end with an enlargement, a resilient latch element adapted to be anchored to the other cover and disposed to extend into the opposite end of said bore when the book is closed, said latch element having a shoulder on one side thereof for engagement with said enlargement for latching the book in a closed position, and cam means slidably engaging the latch element and adapted to be actuated by a key for displacing the latch element shoulder out of engagement with the enlargement of the lock element, said cam means being slidably supported solely by the latch element and being located, in entirety, between the ends of the latch element so as to render said cam means inaccessible, except by means of the key, when the lock is mounted on the book and in locking position.

4. A book lock as in claim 3, said resilient latch element having a cam surface at its free end for engagement with said enlargement as the book is moved toward a closed position for laterally displacing the shoulder thereof for movement past said enlargement and into a position to be spring projected into interlocking engagement therewith.

5. A book lock as in claim 3, said resilient latch member having a cam surface, and a cam member slidably mounted on and supported solely by the resilient latch member and adapted to be actuated by a key inserted between the book pages to laterally displace the resilient latch member to disengage its shoulder from the enlargement.

6. A book lock as in claim 1, said cam means comprising a ring adapted to be displaced longitudinally of the spring fingers by a turning movement of the key which is inserted between leaves of the book, between the spring fingers and between said other book cover and the ring.

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