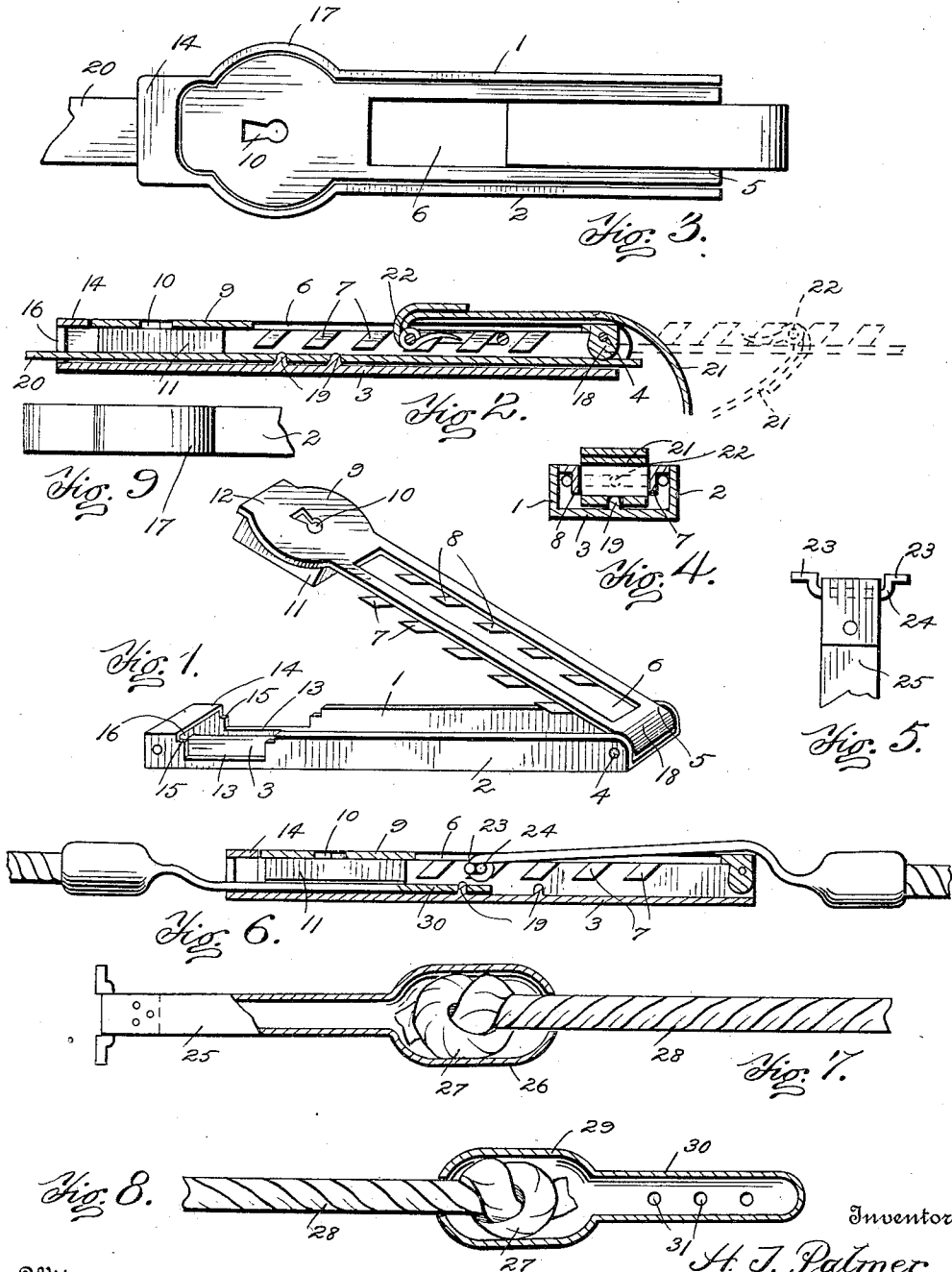


H. J. PALMER.
STRAP LOCK.
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1,065,390.

Patented June 24, 1913.



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STRAP-LOCK.

1,065,390.

Specification of Letters Patent.

Patented June 24, 1913.

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To all whom it may concern:

Be it known that I, HENRY J. PALMER, a citizen of the United States, residing at Greensboro, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Strap-Locks, of which the following is a specification.

This invention relates to strap locks.

The object of my invention consists in providing a locking or holding device for the opposite ends of a strap belt or band of any species for positively preventing the relative disengagement of either end thereof.

In its broadest aspect my invention contemplates the construction of a simple, inexpensive, efficient and suitably compact lock for securing the opposed ends of a band or strap under tension against displacement and will be found efficacious in situations where comparative security against breakage and displacement of straps, bands and the like is sought.

With the above and further objects in view my invention consists in the combination, arrangement and details of construction shown in the drawings and then more particularly pointed out in the appended claims.

Similar reference numerals designate similar parts throughout the respective views of the drawings, wherein,

Figure 1 is a side elevation in perspective of the strap lock in open position, Fig. 2 is a longitudinal sectional view thereof in closed position, Fig. 3 is a top plan view of a modified form of strap lock, Fig. 4 is a cross sectional view of the device, Fig. 5 is a detail view of a modified form of buckle engaging the strap lock buckle, Fig. 6 is a longitudinal sectional view of the strap lock, engaging ropes, Fig. 7 is a detail view, partly in section and partly broken away, showing a housing for one end of a rope, Fig. 8 is a view similar to Fig. 7 showing a housing for the opposite end of the rope, and Fig. 9 is a fragmental view in side elevation of Fig. 3.

The strap lock is composed of a U-shaped member and a cover having relative movement thereto and arranged to close thereupon, causing the opposed ends of the strap or band to be held. The oppositely arranged side walls of the U-shaped member are designated 1 and 2 and extend upwardly of the floor 3 of said member. A pivot 4

mounted at one end of said side walls serves as a pivotal bearing for the cover member 5 which is substantially of corresponding length with said member and is formed with a relatively enlarged slot 6, and is provided at diametrically opposite points spaced inwardly of the edges of the sides with a plurality of preferably inclined lugs or teeth 7 and 8 respectively, which are arranged that they will not contact with the floor 3 of the U-shaped member when the cover is in closed position, as shown in Fig. 2.

The cover member 5 is formed at its free end with a flat, preferably rounded extension 9 having a key receiving opening 10 and terminating in a lip 12, a block 11 being carried under the extension 9, spaced slightly inwardly of the lip 12 which is arranged to have contact with the floor 3 of the U-shaped member when said cover has been turned on the pivot 4 to closed position; the recesses 13 are formed short of one end of the U-shaped member in alinement to accommodate the block 11 and the member 14 is transversely disposed and connected to the sides 1 and 2 and is formed with oppositely arranged shoulders 15 upon which the lip 12 of the cover will bear in closed position to present a flush outer face to the strap lock.

In Figs. 3 and 9 a modified form of the invention is shown. Instead of the recesses 13 the correspondingly rounded surfaces 17 are formed upon the side walls 1 and 2 for the rounded edges of the block carrying member 9. The member 18 is an eccentric or cam lug formed upon the cover 5 over which the pivot 4 is passed and in practice it serves the purpose of bearing against one of the ends of the strap to insure the engagement therewith of the lock, the floor 3 being formed with upwardly projecting lugs 19 arranged to pass through a series of adjusting openings formed upon the strap.

The device will operate as follows: One end of the strap which will be formed with a series of longitudinally extending openings will, while the cover is open, be passed through openings 16 under the member 14 of the U-shaped member and extended to a point beyond the eccentric 18, the lugs 19 being passed through the corresponding openings of said strap and the strap will then overlie the floor 3 of said U-shaped member. While the cover remains open the

buckle end of the strap will be secured thereto, the buckle will be caused to engage one pair of the teeth or lugs 7 and 8 projecting from said cover, the particular one depending on the degree of adjustment required for said strap; the loop of the buckle will be passed around the appropriate tooth and the body of the strap is free to lie in the slot 6 and may then be stretched taut by closing the cover until the block 11 has contacted the floor 3. A key of any suitable make may be passed through the key hole 10 whereby the cover may be locked in closed position. The eccentric 18 is also effective to grip the strap when the openings through which lugs 19 pass are in engagement and it is obvious, therefore, that neither end of the strap can be disengaged until the cover is thrown back on pivot 4. This positive locking of the opposed ends of the strap is a feature of prime importance in my invention. Ropes or similar flexible connections may just as readily be locked by the device of my construction in the following manner: A buckle of suitable construction will preferably be employed and is composed of a U-shaped member 24, passed through the loop in the member 25 and the oppositely arranged and rectangular lugs 23 formed upon the U-member 24 will be caused to bear against the opposite teeth 7 and 8 chosen therefor so that as the rope is put under tension said tooth will prevent the displacement of said lugs 23; the member 25 is shown in the form of an elongated hollow shank terminating in a relatively large housing 26 for the knot 27 formed in a rope 28 passed through said housing and around the material to be strapped. The housing 26 is for one end of the rope and for the opposite end a housing 29 will be provided to inclose a similar knot as in 27, which housing is integral with a hollow shank 30 arranged to overlie the floor 3 of the tubular member as shown clearly in Fig. 6 and through the opening 31 of which shank the lugs may be passed. The relative position of the members 25 and 30 are shown in said Fig. 6 from which it will be obvious that the lugs 23 of the specially formed buckle are held against displacement by the appropriate teeth 7 and 8 so that when said cover 5 is closed the rope 28 may be put under tension and remain securely in locked position.

Numerous modifications may be resorted to in practice without departing in principle from the details of construction shown herein and specified in the appended claims.

I claim and desire to secure by Letters Patent:

1. A device as described consisting of a channel member having side walls and a bottom wall the entire length thereof, a strap one end of which is adapted to project through said channel member, pins projecting inwardly from said bottom, a hinged lever top having a longitudinal opening therein, a series of opposing lugs on said top projecting inwardly and adapted to prevent the disengagement of said strap from said pins, and a bar on the opposite end of said strap adapted to be held by said lugs.

2. A device as described consisting of a rectangular member having a bottom wall extending its entire length, and side walls projecting from said bottom, a hinged lever top having a cam thereon, a strap adapted to be held against said bottom by said cam, said strap having a bar on one end thereof adapted to be engaged by said top, said top having a longitudinal slot therein, a series of opposing inclined lugs projecting from said top whereby said bar may be adjustably held, said strap adapted to project entirely through said device and lie flat against said bottom its entire length, pins projecting upwardly from said bottom adjacent said lugs to engage openings in said strap, said lugs adapted to hold said strap from rising out of contact with said pins.

3. A device as described consisting of a channel member having bottom and side walls and a strap adapted to be engaged by said device, pins projecting from said bottom, a hinged top having inwardly projecting lugs adapted to hold said strap in engagement with said pins, a cam and a lock carried by said top adapted to hold said strap.

4. A device as described consisting of a channel member having bottom and side walls and a strap member adapted to be engaged by said device, pins projecting from said bottom, a hinged top having inwardly projecting lugs adapted to hold said strap in engagement with said pins, a cam and a lock carried by said top adapted to hold said strap member, a bar at one end of said strap adapted to engage said top, said lugs being inclined to hold said bar.

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

HENRY J. PALMER.

Witnesses:

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