March 13, 1934. T. B. LEWIS 1,950,803

SAFETY LOCK

Filed Dec. 12, 1930

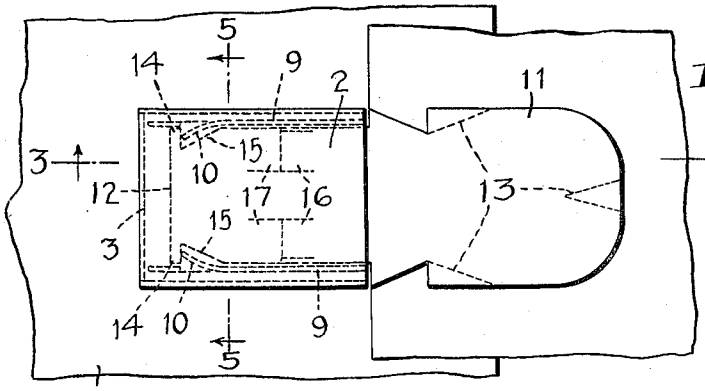



Fig. 1.

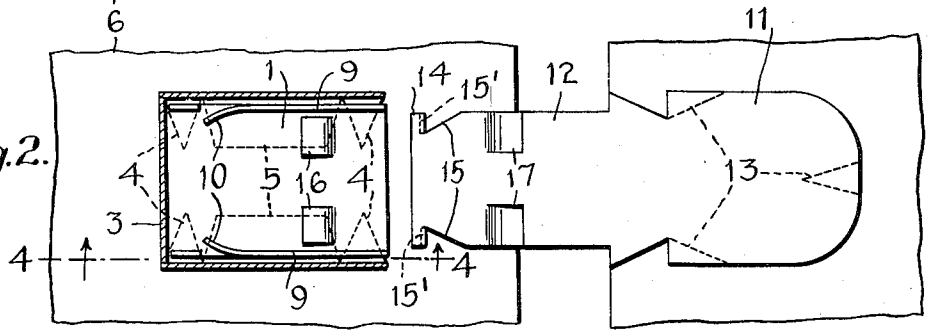



Fig. 2.

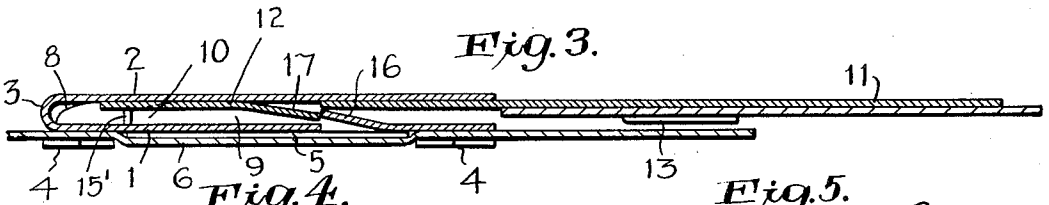



Fig. 3.

Fig. 4.

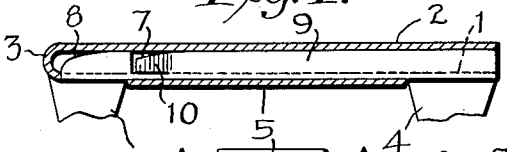
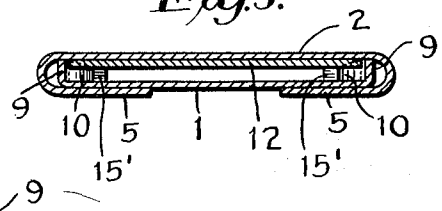



Fig. 5.



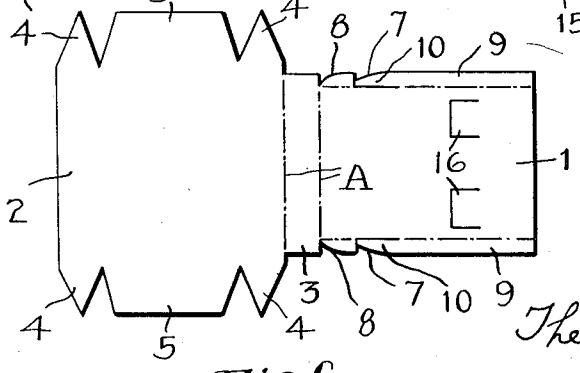




Fig. 6.

Inventor

Theodore B. Lewis

By W. F. Bruning

Attorney

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## SAFETY LOCK

Theodore B. Lewis, Brooklyn, N. Y., assignor, by mesne assignments, to General Seal & Lock Corporation, a corporation of Delaware

Application December 12, 1930, Serial No. 501,813

5 Claims. (Cl. 229—78)

This invention relates to safety locks for containers such as envelopes and particularly relates to such locks which may be attached to envelopes and permit the envelopes with the locks attached to be passed thru typewriters.

One of the objects of the invention is to provide a safety lock comprising a sheath and a blade adapted to enter therein, the sheath being provided at the sides with spring lock elements which cooperate with lateral projections carried by the blade.

Another object is to provide a safety lock comprising a sheath and a blade adapted to enter therein, in which a portion of the sheath is provided with side spring locking elements and another portion of the sheath is formed to provide overlapping sides therefor, to shield the locking elements and prevent tampering with the lock.

Another object is to provide a safety lock having a sheath with side spring locking elements and a blade having lateral projections cooperating with the spring locking elements and to also provide additional spring locking means which act in a different direction than the first named side locking elements.

With the above and other objects in view, my invention consists in the parts, improvements and combinations more fully pointed out hereinafter.

Referring to the drawing which illustrates one embodiment of the invention:

Figure 1 is a top plan view of the safety lock attached to an envelope, the blade and side spring locking elements being shown in dotted lines.

Figure 2 is a top view, partly in section, showing the side spring locking elements of the sheath and showing the blade removed from the sheath.

Figure 3 is a cross-sectional view on the line 3—3 of Figure 1.

Figure 4 is a cross-sectional detail view of the sheath, taken on the line 4—4 of Figure 2,

Figure 5 is a transverse cross-section on the line 5—5 of Figure 1, and

Figure 6 is a detail view of the blank from which the sheath is formed.

In the drawing the safety lock is shown comprising a sheath and a blade adapted to enter and be locked in the sheath. In the preferred form two safety locks are attached to each envelope, a pair of sheath members being attached to the body of an envelope and a pair of blades being attached to the flap of the envelope.

The sheath is preferably formed out of a single piece of metal. This metal blank, see Figure 6, is adapted to be folded along the lines A, to provide an under lap 1 and an over lap 2, and rear connecting wall 3. The outer edges of over lap 2, are cut to provide prongs 4 and intermediate overlapping side walls 5. The prongs 4 are adapted to be turned perpendicularly to the lap 2 and passed thru the body of an envelope 6 and then are bent back against the inner face of the envelope body to securely attach the sheath to the envelope body.

Spring locking elements are provided at the sides of the sheath. This construction enables the thickness of the lock to be reduced so that envelopes to which the locks are attached may readily pass thru typewriters. The provision of laterally acting spring locking elements enables these elements to be relieved of strain while envelopes are being addressed.

As shown, the under lap 1 of the sheath is cut away at its outer edges as shown at 7 and 8 and the underlap, adjacent each outer edge is slit transversely and lengthwise of the lap 1. The outer edges are then bent to form upturned sides 9. The transverse and lengthwise slitting of the edges enables the portions 10, of the sides to be turned inwardly of the sheath to form spring locking elements. Sides 9, it will be seen are extended rearwardly, beyond the spring locking elements and maintain the spaced relation between under lap 1 and over lap 2. Also, the cutting at 7, of the outer edges of lap 1, provides an inclined top face for the locking elements 10, and spaces them from the over lap 2. This avoids pinching of the spring locking elements between the upper and under laps.

The blade comprises a body portion 11 and a projecting tongue 12, the latter being adapted to enter the sheath. The body portion of the blade is provided with prongs 13, which are adapted to be passed thru the flap of an envelope and bent back against the inner face of the flap to attach the blade to the envelope flap.

The outer end of the tongue 12, is provided with lateral projections 14, which cooperate with the spring locking elements. Directly behind the projections 14, the outer edges of the blade are cut to provide recesses at 15, in which the spring locking elements 10 of the sheath are received.

When the blade is inserted in the sheath projections 14 engage the side spring locking elements and press them laterally outward. As the projections pass the spring members, the latter spring in the recesses at 15 to lock the blade in the sheath. Projections 14, are, preferably provided with turned down lips 15', which insure locking engagement between the projections of

the blade and the side locking elements of the sheath.

The provision of laterally acting locking members enables the thickness of the lock to be maintained at a minimum so that the lock will not interfere with the passing of envelopes thru a typewriter, while the cooperating locking elements do not need to be reduced in length and can be of such length as to insure proper locking engagement. The use of laterally acting locking members also results in relieving the spring elements from strain. Often the lock, attached to an envelope, is between the platen and the keys of a typewriter and receives the impact of the keys. In the construction illustrated the force of such impact is transverse to the action of the spring members so that the springs are relieved from the strain incident to such blows.

Means are provided for shielding the spring locking elements to prevent tampering with the lock.

As shown, the over lap 2 of the sheath is provided with intermediate side portions 5. These portions are bent so as to overlap the side portions 9 and spring locking elements 10 of the under lap, and are then bent and flattened against the under lap 1. The overlapping side portions 5 thus effectively shield the side locking elements and prevent instruments being inserted to disengage the locking elements. The sides 5, are turned, as shown, to avoid sharp corners, see Figure 5, and facilitate the passage of envelopes with locks attached, thru typewriters.

Additional locking means are also provided to assist in securely locking the blade in the sheath.

As illustrated, the under lap 1 of the sheath is provided with raised portions 16, and lips 17 are punched from the blade. As the blade is inserted lips 17 will give as they pass over the raised portions 16 and then drop behind the raised portions. It will be seen that lips 17 and raised portions 16, cooperate to provide additional locking means which act in a different direction than the side locking means previously described. Also, that the raised portions 16 are disposed so as to shield the side locking elements to prevent instruments being inserted at the sheath opening to tamper with the side locking elements.

Having thus described the construction, it will be understood that changes may be made in carrying the invention into effect, without departing from the principle thereof.

What I claim is:

1. A safety lock comprising a metal sheath having an under lap and an over lap, each having sides, a portion of the sides of one lap being slit and bent inwardly to form spring locking elements the sides of the other lap being bent to cover and shield said locking elements, a blade adapted to enter the sheath, and lateral projections carried by the blade with which the spring locking elements cooperate to lock the blade in the sheath.

2. A safety lock comprising a metal sheath having an under lap and an over lap, each having sides, a portion of the sides of the under lap being slit and bent inwardly to form spring locking elements, a blade adapted to enter the sheath, and lateral projections on the blade with which the spring locking elements cooperate to lock the blade in the sheath, the sides of the over lap being disposed about the sides of the under lap to shield the spring locking elements.

3. A safety lock comprising a metal sheath having an under lap and an over lap, each having sides, each side of the under lap being slit transversely intermediate its ends and under slit to separate a portion of each side from the under lap, said portions being bent inwardly to form spring locking elements the sides of the overlap being disposed about the sides of the underlap to shield said locking elements, a blade adapted to enter the sheath and lateral projections carried by the forward end of the blade, said blade being provided with recesses behind said projections adapted to receive the spring locking elements, said lateral projections carrying perpendicular lips which engage the spring locking elements.

4. A safety lock comprising a sheath having an under lap and an overlap, each having sides, each side of the under lap being slit transversely and lengthwise intermediate its ends and bent inwardly to form a spring locking element the sides of the overlap being disposed about the sides of the underlap to shield said locking elements, a blade adapted to enter the sheath, lateral projections carried by the blade with which the spring locking elements engage, and a pair of spring lips carried by said blade intermediate its ends and adapted to engage locking members carried by the under lap of said sheath, and arranged behind the spring locking elements.

5. A safety lock comprising a sheath having an under lap and an over lap, each having sides, each side of the under lap being slit transversely and lengthwise intermediate its ends and bent inwardly to form a spring locking element, said sides extending forwardly of said locking elements the sides of the overlap being disposed about the sides of the underlap to shield said locking elements, a blade adapted to enter the sheath, lateral projections having perpendicular lips carried by the forward end of the blade, said blade being provided with recesses behind said projections adapted to receive the spring locking elements, and a pair of spring lips carried by the blade intermediate its ends, and adapted to engage locking members raised from the under lap of said sheath, and arranged behind the spring locking elements.

THEODORE B. LEWIS.