Oct. 17, 1933. F. KEIDEL 1,930,559

SEALING DEVICE

Filed March 31, 1932

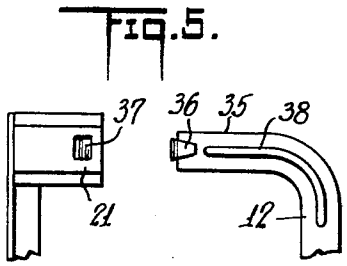


FIG. 5.

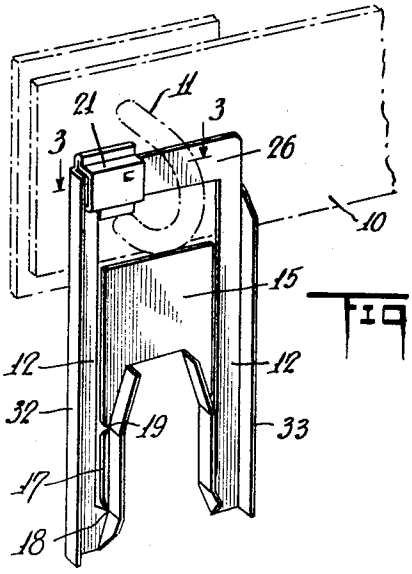


FIG. 1.

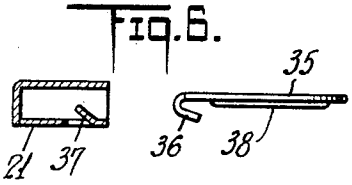


FIG. 6.

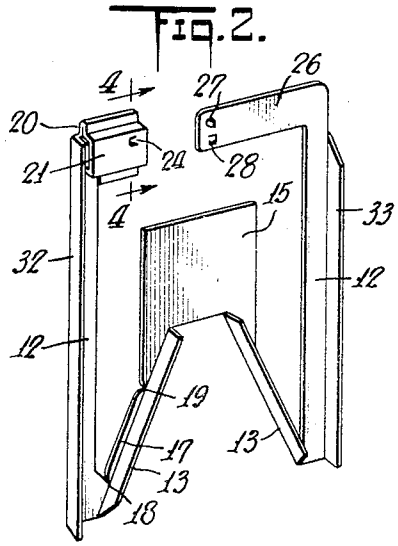


FIG. 2.

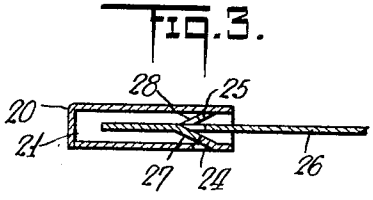


FIG. 3.

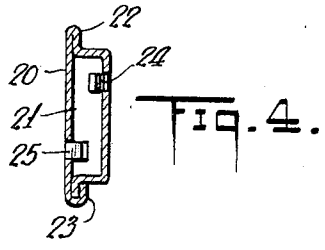


FIG. 4.

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SEALING DEVICE

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Application March 31, 1932. Serial No. 602,218

4 Claims. (Cl. 292—322)

In cases where milk cans, crates, boxes, bags or other containers of valuable merchandise are to be sealed before shipment, and the ultimate consumer, user or dispenser is not known to the shipper, it is not practical to use an ordinary padlock because of the fact that a key is required to open it, and a wide distribution of keys to all who may have a right to open the lock results in keys being made by or getting into the possession of many persons who have no right to open the container, and who may open it, extract a portion of the contents, and relock the container. Detection of the identity of the thief is thus difficult.

One object of the present invention is to provide a locking device which can be manufactured at low cost, and which can be easily applied to a staple, and locked by the simple manipulation of one hand, and which cannot be removed without breaking it, so that it cannot be again used.

Another object is to provide a locking device which can be applied and locked by a single simple manipulation of one hand, by merely squeezing together a pair of opposed parts pre-positioned for direct reception of a staple therebetween.

A further object is to provide a cheap and easily applied seal formed of a single piece of sheet metal, so that no assembly of parts is required either in the manufacture or use.

A further object is to provide a seal in the general form of a padlock and which may be applied by a single and slight bending operation to telescope interlocking parts.

Other objects and advantages will be later pointed out or will be apparent from a consideration of the forms hereinafter described.

In the accompanying drawing, there is shown for purposes of illustration, two forms which the present invention may assume. In the drawing

Fig. 1 is a perspective view of a locking device of the present invention in locked position and applied to the staple of a container or similar object.

Fig. 2 is a perspective view of the locking device shown in open position.

Fig. 3 is a section taken on line 3—3 of Fig. 1, but on a larger scale.

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Fig. 5 is a front view of a portion of another form of locking device, and

Fig. 6 is an edge view of the parts shown in Fig. 5.

The locking device of the present invention is shown applicable for sealing a container or similar object having an ordinary hasp 10 slotted to receive a staple 11. The locking device is constructed from a single metal blank cut to form a pair of rigid transversely spaced arms 12. These arms 12 are preferably substantially parallel, and the spacing is such as to permit the device, when in open position as shown in Fig. 2, to be gripped in one hand.

Means are provided for connecting said arms in spaced relationship while permitting them to be moved towards each other when subjected to the pressure action of the operator's hand. This means, in the specific form shown, includes a pair of links 13 extending from the lower ends of the arms 12, and converging upwardly and inwardly towards the upper ends of said arms. These links are connected together at their upper ends by a plate member 15 upon which the name of the shipper, the date of shipment, or such other data may be printed, stamped or otherwise applied. The links 13 are constructed to permit the two arms 12 to be pressed together by simple hand manipulation. For that purpose, the links are weakened at spaced points therealong so that they will be bent at these points when the arms are pressed together. The links 13 comprise strips having stiffening flanges 17 along one edge intermediate the ends of said links. These flanges terminate just short of the lower ends of the arms 12 at points 18 to weaken the links along a line passing through said points. Similarly, the upper ends of the flanges 17 terminate just short of the plate member 15 at points 19 to weaken the links at these points. Thus, in squeezing the side arms towards each other, the links may easily bend at the weakened points, but not at other points intermediate of their ends.

Means are provided whereby upon the movement of the arms 12 together, said arms will be automatically interlocked at their upper ends. For this purpose, one of the arms 12, in the form shown in Figs. 1 to 4, is provided at the upper end thereof with an extension 20 bent to form a housing 21 extending substantially at right angles from the arm and towards the other arm. In bending the blank, there is formed a reenforcing rib 22 along one side of said housing, and a seam 23 along the opposite edge. The housing 21 is provided with a pair of tongues 24 and 25 stuck out from the opposed parallel walls thereof, and extending inwardly in opposite directions as shown in Figs. 3 and 4.

The other of the interlocking parts comprises an extension 26 projecting transversely from the

upper end of the other arm 12, and in alinement with the housing 21. This member 26 is provided with a pair of spaced tongues 27 and 28 struck therefrom and extending from opposite surfaces, for slipping past and engaging the tongues 24 and 25 respectively. It is seen, therefore, that when the two arms 12 are brought together, the member 26 will be inserted into the housing 21, the spring action of the tongues 27 and 28 as they engage the tongues 24 and 25, permitting the movement of the member 26 into said housing. As soon as the tongues 27 and 28 pass the ends of the tongues 24 and 25, they will spring outwardly to prevent retraction of the member 26 from the housing 21. During the movement of the two arms 12 towards each other, the links 13 will be bent at points 18 and 19 as shown in Fig. 1.

In order to prevent the fingers from coming in contact with any sharp edges of the arms 12 during locking operation, and to stiffen and reenforce them, these arms have a pair of flanges 32 and 33 extending transversely from the general plane of the device, so that the arms themselves will not easily bend, and so that the fingers, in operating the device, engage widened surfaces. Also, the flange 32 is extended upwardly to close the outer end of the housing 21 to thereby prevent unauthorized tampering with the interior of said housing.

In Figs. 5 and 6 is shown a simplified clasp. In this construction, one of the arms 12 has a transverse extension 35, the outer end of which is bent to form a hook 36. The other element of the clasp constitutes a housing 21 similar to that shown in Fig. 2, except that only one tongue 37 is necessary. The hook 36, due to its spring action, will pass the tongue 37 when inserted in the housing 21, but will then engage said tongue to prevent withdrawal of the extension 35 from the housing 21.

The portion between the extension 35 and the arm 12 to which it is connected is rounded to permit its insertion through a staple where little room is available. In order to strengthen this rounded portion, it is advantageous that a reenforcing rib 38 be struck out therefrom.

The seal may be opened only by destroying it. If desired, the device may be provided with weakened lines at any desired points to facilitate the destruction thereof, or the metal may be easily cut into at any desired point.

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

1. A seal formed from a single sheet metal blank, including a pair of rigid, laterally spaced, substantially parallel arms lying in the same plane, a pair of inwardly converging links having their converging ends connected together and disposed between said arms, and each having its diverging end connected to one end of one of said arms, said links being easily bendable at points adjacent to opposite ends thereof, whereby said arms may be moved in parallelism toward each other, and means integral with said arms for interlocking the opposite ends of said arms upon said movement in parallelism.

2. A locking device formed from a single sheet metal blank, including a pair of laterally spaced, substantially rigid arms, members connected to said arms and disposed therebetween, said members being easily bendable in respect to each other and in respect to said arms to permit said arms to move toward each other in parallelism, a plate disposed between said members and integral therewith and between said arms, and means for interlocking said arms upon movement of said arms toward each other.

3. A locking device formed from a single sheet metal blank, including a pair of laterally spaced, substantially parallel arms, links connected to said arms at one end and disposed therebetween, and permitting said arms to move toward each other in parallelism, said arms and said links each having means for stiffening the same to prevent bending except at predetermined points, and means for interlocking the opposite ends of said arms upon their movement toward each other.

4. A locking device formed from a single sheet metal blank, including a pair of transversely spaced arms having flanges lengthwise thereof along their outer edges, and presenting contact surfaces adapted to be pressed to move said arms toward each other, means connecting said arms at one end and having spaced bendable points permitting said arms to be moved in parallelism, and means for interlocking said arms upon movement of said arms toward each other.

FRANK KEIDEL.