

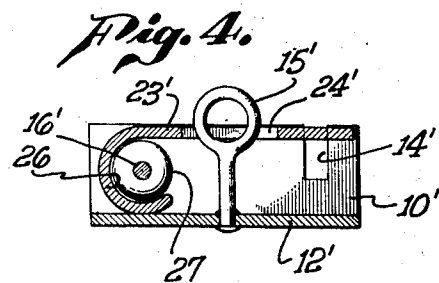
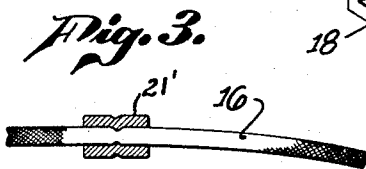
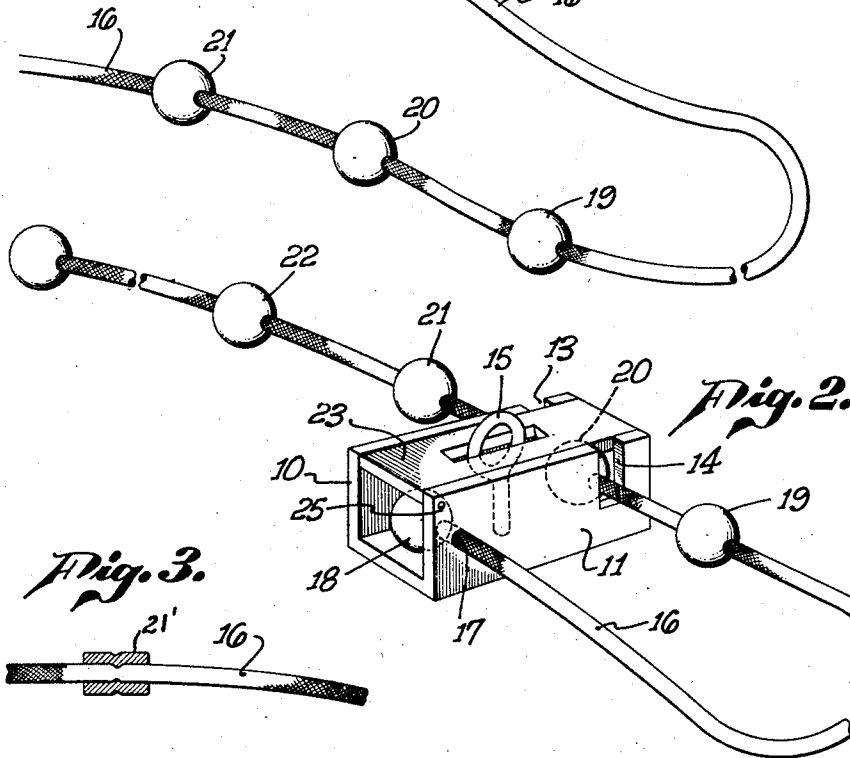
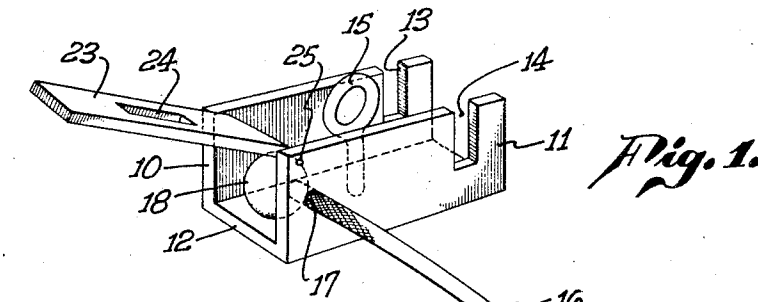
April 20, 1948.

G. D. HAVER

2,440,012

LOCKING DEVICE

Filed May 29, 1944



GABRIEL D. HAVER,  
INVENTOR.

BY

*C. E. Hildebrand*

ATTORNEY.

## UNITED STATES PATENT OFFICE

2,440,012

## LOCKING DEVICE

Gabriel D. Haver, Los Angeles, Calif.

Application May 29, 1944, Serial No. 537,811

3 Claims. (Cl. 24—30.5)

1

2

This invention pertains to a light weight, simple, efficient, adjustable locking device particularly adapted for use with sea bags, sleeping bags and other containers having spaced grommets along the edge of the container. Heretofore, bags or containers of this type have been tied or closed by lacing a rope through the grommets, the ends of the rope then being tied into a knot. Such locking means are obviously easily opened and often become untied. In addition, theft of personal articles from sleeping bags, sea bags, etc., is a common occurrence because of the ease with which one can untie the knot and gain access to the contents of the bag.

The locking device of the present invention is indestructible and adjustable so that a positive, complete closure is attained, whether the bag or container is full or only partially filled. The device is characterized by the ease with which it can be applied, its light weight, and the positive character of the closure which is attained.

Generally stated, the device consists of a body portion provided with a flexible member, one end of the flexible member being attached to the body portion. The flexible member carries a plurality of spaced locking elements. The flexible member, together with its locking elements, may be threaded through the various grommets of the container and then pulled taut so as to gather the material in which the grommets are mounted into close proximity or into as close proximity as the contents of the container permit. The body portion is provided with a pair of spaced slots adapted to slidably receive the flexible member. When the flexible member is inserted into the slots with a locking element between said slots, a tie loop is formed which positively holds the opening of the container in a closed position. A movable keeper cooperating with a hasp carried by the body portion and the slots retains the flexible member in such locked position. The latching arm or tongue of a padlock may then be applied through the hasp, holding the keeper in the locked position.

It is an object of the present invention, therefore, to disclose and provide a simple, inexpensive, adjustable locking device for sea bags, sleeping bags, mail bags and other containers provided with spaced grommets through which the locking device may be threaded.

Other objects and advantages of the invention will become apparent from the following description. In order to facilitate understanding, reference will be had to the appended drawings, in which:

Fig. 1 is a perspective view of the device.

Fig. 2 is a perspective view of the device with the flexible member in a position which it assumes when the device is in use.

Fig. 3 is a portion of the flexible member with a different type of locking element thereon.

Fig. 4 is a longitudinal section through a somewhat modified form of device.

As shown in the drawings, and particularly in Figs. 1 and 2, the device consists of a body portion which may be of channel section and including the side walls 10 and 11 and a bottom or web 12. Each of the side walls 10 and 11 is provided with a slot, such as the slots 13 and 14, said slots extending from the upper edges of the legs 10 and 11 toward the web 12. A hasp 15 is firmly connected to the body portion and extends somewhat above the plane of the upper edges of the side walls or legs 10 and 11. A flexible member 16 is provided, one end of the member being attached to the body portion and the other being free. In practice, such flexible member can be made of any suitable material but is preferably strong and non-corrodible. Flexible wire or cable, such as the control cable used on aircraft, forms a suitable material for this purpose. Any suitable means of attaching one end of this cable or flexible member 16 to the body portion may be utilized. In the drawing, the side wall 11 is shown provided with a port 17 through which the end of the cable extends into the body portion, the end of the cable carrying a ball or head 18 welded, pressed or otherwise firmly attached to the end of the cable so that such cable can not be withdrawn or removed from the body portion. The ball 18 constitutes a locking element.

Spaced along the length of the flexible member 16 are other locking elements, as at 19, 20, 21, etc. These locking elements may be made of deformable metal which is pinched onto, sweated onto, or otherwise firmly attached to the flexible member 16. The loose or free end of the flexible member 16 may be provided with a similar locking element to prevent fraying of such member in the event it is a twisted or woven cable, and to facilitate the insertion and threading of the flexible member through the various grommets of the sea bag or other container to which the locking device is to be applied.

It is to be noted that the locking elements 19, 20, 21 and the like, are of larger diameter than the flexible member 16 and provide shoulders, extending outwardly from the member, whereby the locking elements can not pass through the slots 13 and 14.

Although spherical locking elements are shown in Figs. 1 and 2, such locking elements may take the form illustrated in Fig. 3 wherein a small section of tubing 21' is shown slipped upon the cable 16 and pinched, welded, soldered or otherwise attached to the cable, the section of tubing 21' acting in the same manner as the various locking elements 19, 20, 21 and 22 shown in Figs. 1 and 2.

3

The side walls 10 and 11 are spaced so as to slidably receive a locking element when the flexible member 16 is placed in the slots 13 and 14. Since the locking elements are of larger diameter than the flexible member 16, axial or longitudinal movement of the flexible member through the slots is prevented when a locking element is positioned between the side walls 10 and 11.

The body portion is also provided with a movable keeper, such as is indicated at 23, said keeper being provided with a slot 24 through which the upper end of the hasp 15 may extend. As shown in Figs. 1 and 2, the keeper may be pivoted as at 25 to the side walls 10 and 11 so as to present an upper surface flush with the upper edges of the walls 10 and 11 when in locked position and to thereby contain and restrict a flexible member extending through the slots 13 and 14.

In actual use, the free end of the flexible member is threaded through the spaced grommets carried by the edge portions of a container and pulled taut so as to gather such closure areas of the sea bag or other container with the grommets in the closest possible relationship. After being thus tightened and with the keeper 23 in raised position, the flexible member is moved transversely so as to slip into the slots 13 and 14 with a locking element between such slots. The keeper is then depressed so as to close the open ends of the slots 13 and 14 and the tongue or latching element of a padlock is passed through the hasp 15, the padlock thereby locking the keeper and locking the sea bag or other container so as to prevent such sea bag from being opened. Although the hasp 15 is shown as being provided with a loop at the upper end and a single leg welded or sweated into the web of the body portion, such hasp may be in the form of a U-shaped member with the looped part extending above the keeper 23 when the keeper is in lowered position.

Fig. 4 illustrates a slightly modified form of device in which the keeper, indicated at 23', is provided with a semi-circular portion 26 adapted to partially encircle a locking element 27 carried by that end of the flexible member which is attached to the body portion. The locking element 27 acts as a pivot around which the keeper 23' may pivot. This construction obviates the necessity of having a separate hinge or pivot point between the keeper and the side walls of the body portion.

The entire device is preferably made of a non-corrosive metal, such as aluminum or aluminum alloy, and plastic or the like, so that weight is minimized and adequate strength is obtained. The utility, mode of use and various adaptations of the device will readily occur to those skilled in the art. Numerous changes and modifications can be made in proportions as well as in the construction of the device and all changes coming within the scope of the appended claims are embraced thereby.

I claim:

1. An adjustable locking device for sea bags, sleeping bags and other containers provided with spaced grommets, comprising: a thin, flexible, elongated member provided with locking elements carried thereby in spaced relation, the locking elements being of greater diameter than the member and including shoulders extending outwardly from the member; a body portion of channel section provided with a slot in each of the legs of the channel smaller in width than the width of said locking elements, said slots

4

extending from the edge of the legs toward a web and being in alignment whereby the flexible member may be introduced through the slot with a locking element between said legs; means for attaching one end of the flexible member to the body portion; a fixed hasp carried by the body portion and extending upwardly between said legs and above the edges of said legs; a keeper hingedly connected to the body portion and provided with a slot through which said hasp may extend, said keeper being adapted to retain one of said locking elements on that portion of the flexible member extending through said slots.

2. An adjustable locking device for sea bags, sleeping bags and other containers provided with spaced grommets, comprising: a thin, flexible member provided with symmetrical locking elements surrounding said member and in spaced relation, said locking elements being attached to said member and being of greater diameter than the member; a body portion provided with side walls, a slot in each of the said side walls smaller in width than the diameter of the locking elements and larger in width than the diameter of the flexible member, said slot being adapted to receive said flexible member, said side walls being spaced to permit a locking element carried by said flexible member to be retained between said side walls; means for attaching one end of the flexible member to the body portion; a fixed hasp carried by the body portion; and a movable keeper pivotally connected to the body portion, said keeper being adapted to close open ends of said slots and to cooperate with said hasp, whereby said flexible member may form a predetermined loop.

3. An adjustable locking device for sea bags, sleeping bags and other containers provided with spaced grommets, comprising: a body portion, a flexible member attached by one end to said body portion, said flexible member being provided with a plurality of locking elements in spaced relation, said locking elements being of greater diameter than the member and adapted to pass through grommets on the container; a pair of spaced walls carried by the body portion, each of said walls including a slot through which a portion of the flexible member may be introduced, said walls being spaced sufficiently to receive and retain a locking element, whereby longitudinal motion of the flexible member through said slots is prevented; a fixed hasp carried by the body portion between the spaced walls; and a movable keeper pivotally carried by the body portion, said keeper being adapted to cooperate with said hasp and retain that portion of the flexible member extending through said slots.

GABRIEL D. HAVER.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

| Number    | Name   | Date         |
|-----------|--------|--------------|
| 1,055,002 | Varnum | Mar. 4, 1913 |

#### FOREIGN PATENTS

| Number  | Country     | Date           |
|---------|-------------|----------------|
| 128,870 | Switzerland | Nov. 16, 1928  |
| 321,115 | Italy       | Sept. 22, 1934 |