April 29, 1930. I. HILL 1,756,356

ONE-PIECE EYELET

Filed Sept. 14, 1928

Fig. 1.

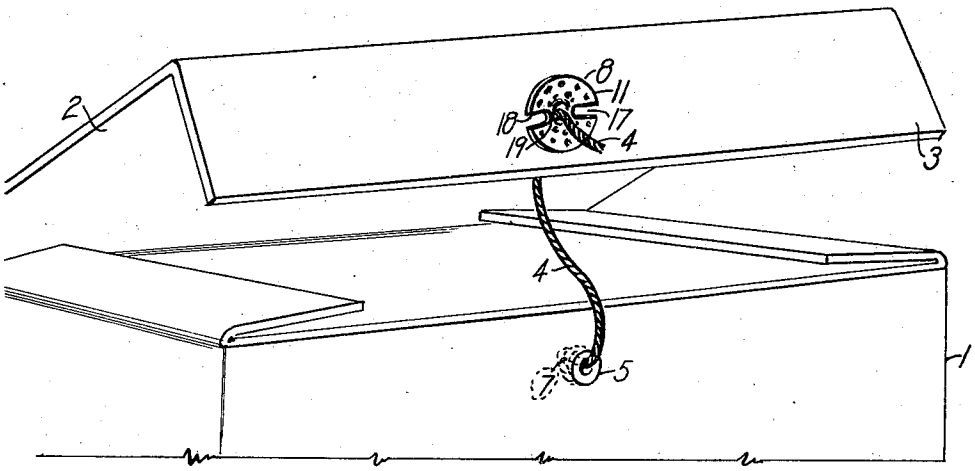


Fig. 2.

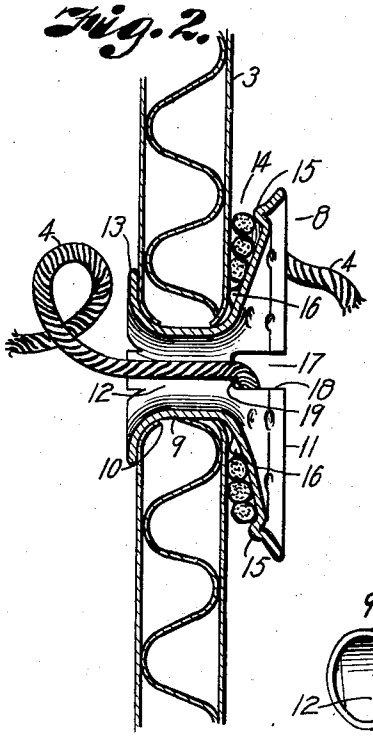


Fig. 3.

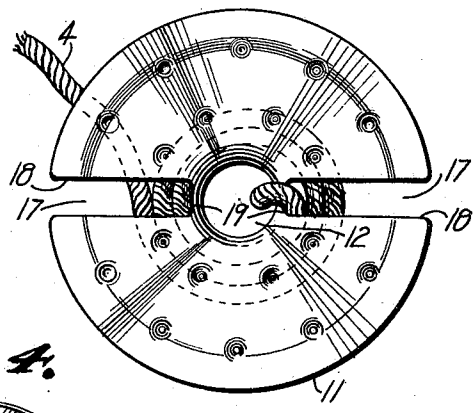
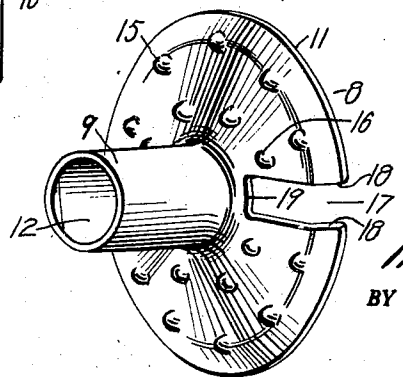


Fig. 4.



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UNITED STATES PATENT OFFICE

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ONE-PIECE EYELET

Application filed September 14, 1928. Serial No. 306,036.

My invention relates to fastening devices and more particularly to devices of that character such as eyelets having central openings for the passage of a cord adapted to latch two elements together, and also to string buttons to which a cord may be latched, for example by winding it about the same, the principal objects of the invention being to combine an eyelet and a string button in a single device, to facilitate the winding of a cord between a string button and its support, to latch the cord to the button, to facilitate admission of the cord to the space between the button and the support, and particularly to latch the individual convolutions of the cord at radially spaced positions between the button and the support.

In accomplishing these and other objects of the invention, I have provided improved details of structure the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of portions of a box and lid provided with my improved fastener.

Fig. 2 is a vertical central section of the lid flap portion in which my improved device is mounted, illustrating the manner of latching the cord to the lid flap.

Fig. 3 is a face view of the device and a portion of the cord attached thereto.

Fig. 4 is a perspective view of the fastener from beneath, illustrating the symmetrical tubular character of the body portion of the fastener before installation in a supporting lid.

Referring in detail to the drawings:

1 designates generally a box, 2 a lid, and 3 a lid flap, representing elements adapted to be latched together by a cord 4.

One of the elements, for example the box, is provided with an eyelet 5 with which one end of the cord is connected, for example by clamping the end of the cord between the eyelet and the wall of the box opening as indicated at 7.

My improved fastener 8 comprises a tubular body 9 adapted to be inserted in an opening 10 formed in the lid for the purpose, and spider-like retaining button members or notched disk 11 extending preferably angularly upwardly from the body 9 and having an opening 12 concentric with the opening of the tubular body.

The inner end of the tubular body may be split and spread to form radial flanges 13 extending over the inner face of the flap to anchor the fastener to the flap. The disk extends angularly from the outer face of the flap to form therewith a tapering recess 14 into which extend bosses such as 15 and 16 on the under surface of the member adapted for engagement by the convolutions of the cord when the cord is wound about the fastener betwen the disk and the flap.

The button and body are preferably formed of a single piece of metal and combine the functions of a string button and eyelet.

The bosses 15 and 16 are preferably arranged in radially spaced rings concentric with the body and spaced radially from each other, whereby the bosses are distributed over the under surface of the disk for engaging a plurality of convolutions of the cord.

Notches or slots 17 are formed in the edge of the disk and preferably extend radially thereof to form flange members 18, the inner ends of the slots being spaced from the axial opening of the disk by webs or shoulders 19 forming curved seats for the portions of the cord that come in contact therewith to prevent abrasion of the cord when the cord is passed through the opening and one of the notches.

In using the device one end of the cord may be assumed to be attached to such an element as a box, and the improved fastener mounted in the lid flap.

In such an application of the invention, the eyelet opening of the lid will register with the eyelet opening of the box when the lid is in closed position, and the cord extending through the lid flap eyelet may be passed through one of the radial slots and wound about the fastener, the several convolutions being latched between the disk portion of the fastener and the lid flap by the inwardly projecting bosses.

The slot formed as described provides for the admission of the cord to the tubular body

portion of the fastener, and diversion of the cord over the tenon or web and laterally under the edge of a flange, latches the cord immediately to the fastener. The outer end of the cord may then be passed through one of the slots outwardly and thereby be latched to prevent unwinding of the cord.

It is apparent that a notched disk of the character described attached to a support, provides for admission of an end of a cord to the space between the disk and the support, that the diversion of the cord over the sides of the flanges will tend to latch the cord to the fastener, that winding of the cord between the disk and the support will further latch the cord and that the free end may be passed outwardly through another notch to further latch the cord.

It is also apparent that the outer convolutions of the wound cord will tend to retain and latch the inner convolutions.

What I claim and desire to secure by Letters Patent is:

1. In a fastener of the character described, a tubular body having a radial flange at one end for anchoring to a flap, and a disk at the other end having an opening registering with the opening of the tubular body and radial slots extending from its periphery toward its center, said disk having radially spaced bosses on its under surface extending toward said flange.

2. In a box lid fastening device, a tubular body mounted in an opening of the lid, a disk-like retaining member extending radially and angularly upwardly from the body and integral therewith and having notches in its periphery for a cord adapted to be passed from the box through the body and wound between the disk and the lid, and radially spaced bosses extending from the under surface of the disk for latching the several convolutions of the cord to the lid.

3. In a one piece eyelet, an integral piece of metal comprising a tubular body having an end portion adapted to be formed into a radial attaching flange and a disk portion at the other end of the body extending angularly upwardly and having radially and circumferentially spaced bosses on its under surface extending toward the position of said flange.

4. In a device of the character described, a tubular body having a radial attaching flange at one end and a radially extending cord retaining member at its other end having a lower face extending angularly to the axis of the body and provided with a plurality of radially spaced annular series of bosses projecting toward said flange.

In testimony whereof I affix my signature.

IRVING HILL.