Oct. 30, 1928. 1,689,691

F. SCHAEFER

CORD SEALING DEVICE

Filed April 7, 1927

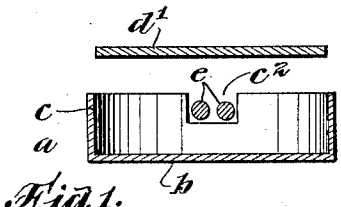


Fig. 1.

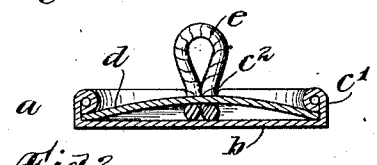


Fig. 2.

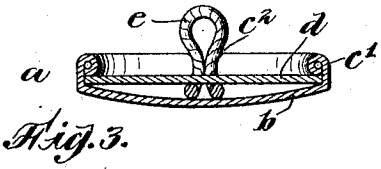


Fig. 3.

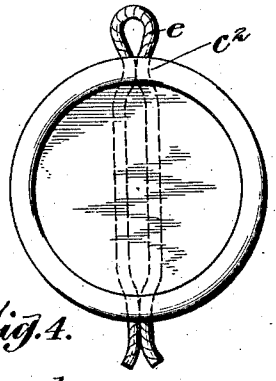


Fig. 4.

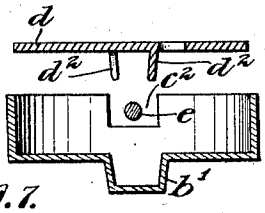


Fig. 7.

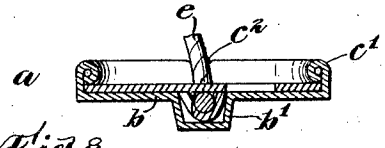


Fig. 8.

Fig. 5.



Fig. 6.

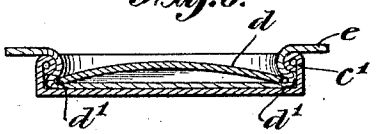


Fig. 9.

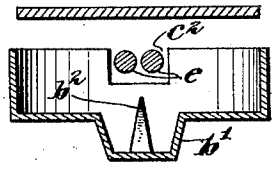


Fig. 10.

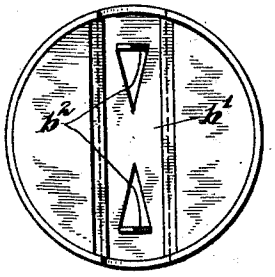
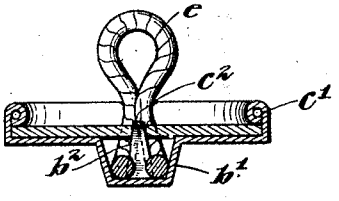


Fig. 11.



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By his Attorneys

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UNITED STATES PATENT OFFICE.

FRIEDRICH SCHAEFER, OF ST. GALL, SWITZERLAND.

CORD-SEALING DEVICE.

Application filed April 7, 1927, Serial No. 181 663, and in Germany November 20, 1926.

The object of this invention is to produce an improved device for the sealing of threads, cords, wires and the like of such a character that it can be applied easily, that when it has been applied it shall not be movable on the cord, and that the cord cannot be released from the seal without destruction of the seal to such an extent as to show that it has been tampered with. The improved seal comprises a cup-shaped member and a cooperating member which is fitted within the cup-shaped member, the cord being interposed between the bottom of the cup-shaped member and the cooperating member and the cooperating member being held in place by crimping or rolling or transforming the edge or rim of the cup-shaped member. Other features of the improvement will be more particularly referred to hereinafter in connection with the accompanying drawing, in which several embodiments of the invention are illustrated. In the drawing:

Figure 1 is a view in sectional elevation showing the members of the sealing device and the cord in positions in which they are ready to be assembled.

Figure 2 is a view in sectional elevation showing the sealing device with its members and the cord assembled, the cooperating member being shown as bowed or domed to accommodate the cord.

Figure 3 is a view similar to Figure 2 but showing the bottom of the cup-shaped member bowed or domed to accommodate the cord.

Figure 4 is a top view of the sealing device shown in Figures 2 and 3.

Figure 5 is a detail view in elevation illustrating the abrupt change of direction of the cord in the sealing device.

Figure 6 is a view generally similar to Figures 2 and 3 but showing a slight modification.

Figure 7 is a view generally similar to Figure 1, showing another modification of the device.

Figure 8 is a view in sectional elevation showing the assembly of the seal illustrated in Figure 7.

Figure 9 is a view generally similar to Figure 1 but showing another modification.

Figure 10 is a view of the cup-shaped member of Figure 9 as seen from above.

Figure 11 is a view in section showing the assembled device of Figures 9 and 10.

The improved sealing device, as illustrated in the several figures of the drawing, comprises a cup-shaped member a, generally but not necessarily circular in form, having a bottom b and a rim c, and a cooperating member d which may be, in its original form, a flat sheet, adapted to fit rather snugly within the rim of the cup-shaped member a. These members are made of any suitable material, usually of relatively thin metal. In all of the illustrated embodiments of the invention the thread, cord or wire to be sealed is laid across the cup-shaped member a, the cooperating member d is placed in position above the cord within the rim of the cup-shaped member and the device is then subjected to the action of a suitable press or equivalent tool by which the cooperating member d is pressed down firmly upon the cord and toward the bottom of the cup-shaped member and at the same time the rim c of the cup-shaped member is crimped, rolled or transformed inwardly upon the edge of the cooperating member d to hold the cooperating member in place, as indicated at c' in each of Figures 2, 3, 6, 8 and 11, whereby the cooperating member d is secured to the cup-shaped member a in such fashion that it cannot be removed without such destructive action on either the cup-shaped member or the co-operating member, or both, as will disclose the fact that the device has been tampered with.

In the embodiments of the invention illustrated in Figures 1, 2, 3, 4, 7, 8, 9, 10 and 11, the rim of the cup-shaped member is notched, as indicated at c^2 in each of said figures, to receive the cord e, the notch not being carried to the bottom, while in the embodiment of the invention illustrated in Figure 6, the cooperating member d is notched at its edge at diametrically opposite points, as indicated at d' to accommodate the cord.

It is of course desirable that the cooperating member d shall be held closely at its edge against the bottom of the cup-shaped member, but it will be obvious that separation of the cooperating member and the bottom b of the cup-shaped member within the edge of the cooperating member will be occasioned by the cord. Such separation may be accomplished by the bowing or doming of the cooperating member d, as shown in Figures 2 and 6, or of the bottom b of the cup-shaped member, as shown in Figure 3. The thickness of the cord may also be accommodated by forming the bottom b of the cup-shaped member a with a channel, as shown at b' in Figures 8, 9, 10 and 11. If desired, for greater security, the cooperating member d

may be formed with prongs d^2, which may be struck up from the metal and made to grip the cord when the parts are assembled, all as shown in Figures 7 and 8, the channel b' accommodating these prongs, as clearly shown in Figure 8. In a similar manner, if so desired, the bottom b might be formed with prongs b^2, struck up from the metal, as shown in Figures 9 and 10, and arranged to engage the cord, as shown in Figure 11, when the parts are assembled.

As illustrated more particularly in Figures 5 and 6, the direction of the cord e is changed abruptly when the sealing device is applied to the cord, so that it is practically impossible to pull the cord through the sealing device.

It will be understood that the selection of materials of which the sealing device is made and the size of the sealing device, as well as the details of construction, will be determined to some extent by the particular use to which the sealing device is to be put and that, except as pointed out in the claims, the invention is not limited to the particular construction shown and described herein.

I claim as my invention:

1. A sealing device for cord and the like, comprising a cup-shaped member and a cooperating member fitted within the rim of the cup-shaped member, the rim of the cup-shaped member being adapted to be turned down upon the cooperating member to hold it in place with the cord interposed between the bottom of the cup-shaped member and the cooperating member, a channel formed in the bottom of the cup-shaped member to receive the cord, and prongs cooperating with the channel section to engage the cord.

2. A sealing device for cord and the like, comprising a cup-shaped member and a cooperating member fitted within the rim of the cup-shaped member, the rim of the cup-shaped member being adapted to be turned down upon the cooperating member to hold it in place with the cord interposed between the bottom of the cup-shaped member and the cooperating member, a channel formed in the bottom of the cup-shaped member to receive the cord, and prongs on the cooperating member to engage the cord in the channel, the prongs being turned over upon the cord when the member is engaged by the cup-shaped member.

This specification signed this 4th day of March, A. D. 1927.

FRIEDRICH SCHAEFER.