Nov. 28, 1939. H. L. C. WENK, JR 2,181,353

BAG SEAL CORD BACKING AND CUTTING GUIDE

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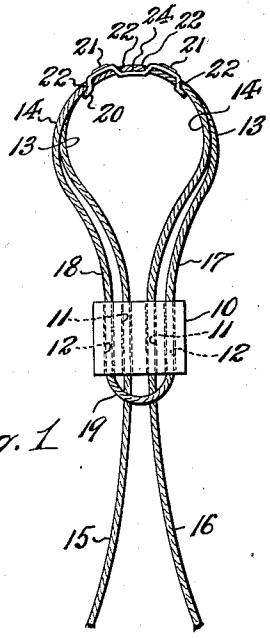


Fig. 1

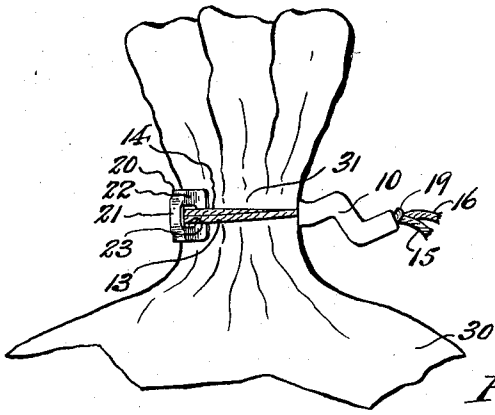


Fig. 2

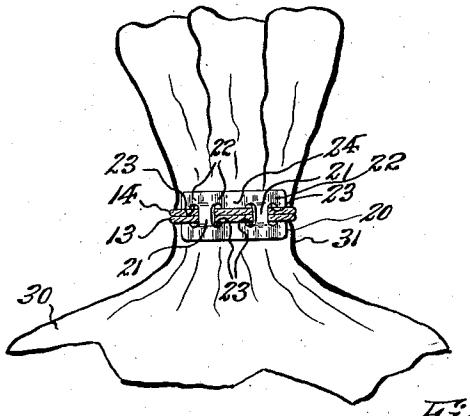


Fig. 3

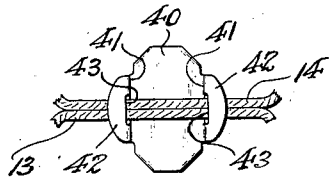


Fig. 4

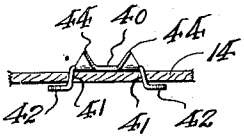


Fig. 5

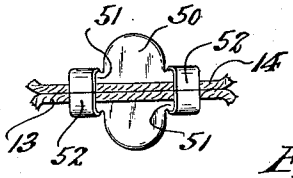


Fig. 6

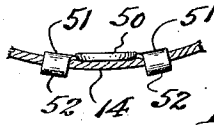


Fig. 7

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BAG SEAL CORD BACKING AND CUTTING GUIDE

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Application August 19, 1938, Serial No. 225,683

1 Claim. (Cl. 292—308)

This invention relates to improvements in bag seals of the type provided with a deformable lead seal body to engage and secure a tie cord arranged to encircle the gathered neck of a bag so as to close the mouth of the same against unauthorized access to the bag content.

Bag seals of the kind to which this invention has reference are extensively used by banks, post offices, express companies and others to inviolably enclose money, valuables and the like.

In the use of such bag seals, once a seal is operatively applied to a bag it cannot be removed therefrom except by severing the tie cord thereof. In the operation of cutting the tie cord which, as operatively encircling the neck of the bag, closely hugs the bag material, there is always risk that the bag material will be gashed, thus destroying the future usefulness of the bag. This is objectionable since, in practice, the bags are otherwise intended to be used over and over again.

It is an object of this invention to provide, in combination with a bag seal of the kind mentioned for cooperation with the tie cord thereof, novel means which is adapted to be interposed between sections of the tie cord bights and the bag neck around which the latter extend, so that said tie cord sections are efficiently backed against operative application thereto of a cutting knife, while at the same time the bag material is adequately protected against gashing during the tie cord cutting operation, the novel means serving these purposes being also constructed to function as a guide for controlling the cutting movement of the applied knife.

This invention has for another object to provide a simple and easily applied seal cord backing and cutting guide device having means to engage and hold the same operatively assembled with the tie cord loops of the seal.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

Illustrative embodiments of this invention are shown in the accompanying drawing, in which:

Fig. 1 is a face view of a bag seal, the tie cord loops of which are provided with one form of the novel cord backing and cutting guide device according to this invention; Fig. 2 is a fragmentary elevation of a bag closed and sealed by a seal, the tie cord loops of which are equipped with said cord backing and cutting guide, the latter appearing in endwise elevation in this view; Fig. 3 is a view similar to that of Fig. 2, but showing the cord backing and cutting guide in front face elevation.

Fig. 4 is a front face elevation of a modified form of the novel tie cord backing and cutting guide means made according to this invention; and Fig. 5 is an endwise elevational view of the same.

Fig. 6 is a front face elevation of another modified form of the novel tie cord backing and cutting guide means also made according to this invention; and Fig. 7 is a top edge elevation of the same.

Similar characters of reference are employed in the above described views, to indicate corresponding parts.

Referring to the drawing, the reference character 10 indicates a seal body, the same being ordinarily made of lead or like relatively soft and easily deformable metal capable of being crushed and corrugated so as to immovably affix the same to its associated tie cord. Initially formed in said seal body 10 are longitudinally extending tie cord receiving passages or openings, usually comprising a pair of inner openings 11 and a pair of outer openings 12; said openings being suitably relatively spaced apart.

Operatively related to said seal body 10 is a tie cord arranged to provide a pair of connected bag neck encircling loops 13 and 14, the respective inner branches of which are formed by the respective free end portions 15 and 16 of said cord, which extend through the inner openings 11 of the seal body 10 to project freely from the outer end of the latter, while the outer branches 17 and 18 of said loops pass through the outer openings 12 and across the outer end of said seal body 10, being connected by a bight 19 extending between the outer ends of said openings 12.

The novel cord backing and cutting guide means essentially consists in a plate member, preferably made of sheet metal, and so formed as to provide perforate means, spaced apart relative to an intermediate portion thereof and through which the loop forming strands of the tie cord may be threaded to thereby irremovably assemble the device in normal initial retained relation to the tie cord loops, and so that, in use, said intermediate portion of said plate member will be interposed between the bag material and portions of said tie cord loops which operatively encircle the gathered bag neck so as to close the bag mouth.

One form of the cord backing and cutting guide means, generally characterized as above set forth, is shown in Figs. 1 to 3 inclusive of the accom-

panying drawing, and comprises a substantially rectangular body 20 made of any suitable material but preferably made of comparatively thin sheet metal. Said body is formed, intermediate its central portion and ends, with transversely disposed outwardly pressed hollow cross ribs 21 the opposite side walls 22 of which are provided with openings 23 through which the loop forming strands of the tie cord may be passed. Said cross ribs are suitably relatively spaced to form, in the plate body, intermediate the same a central cord backing section 24 over the outer face of which the cord strands extend, so that said backing section, in use, will be interposed between the bag material and such over-lying cord strands.

In operatively applying a seal, equipped with cord backing and cutting guide of the form shown in Figs. 1 to 3 inclusive and above described, to a bag 30, the neck 31 of the bag is gathered and constricted to close the mouth thereof. When the bag is thus closed, the loops 13 and 14 of the seal tie cord are engaged over the neck 31 so as to encircle the same, whereupon the free ends of the tie cord are pulled outwardly from the seal body 10, thus constricting the loops 13 and 14 tightly about the bag neck, and thereby also drawing the cord backing and cutting guide plate into closely contiguous embracing relation to the bag material. It will be obvious that, in this operation, the branches of the cord loops 13 and 14 will readily slide through the unrestricted openings 11 and 12 of the seal body 10, until the desired contraction of said loops is attained. When the seal is thus operatively related to the bag neck 31, the seal body 10 is submitted to the action of a suitable deforming press or stamp, by means of which the metal thereof is suitably compressed and crimped or corrugated to thereby tightly close up the openings 11 and 12 of the seal body so that the material of the latter grippingly binds the sections of the tie cord extended therethrough against movement relative to the seal body. Preferably the seal body is transversely bent or corrugated as shown in Fig. 2, thereby effectively preventing any tampering manipulation of the seal body with intent to release its grip upon the tie cord.

When it is desired that the bag be opened under authorized conditions, the authorized operator may do so by severing the loops 13 and 14 of the tie cord. To do this the cutting knife is applied to those portions of the loop strands which overlie the backing section 24 of the backing and guide body 20. When the cutting edge of the thus applied knife is drawn over the loop strands, the spaced cross ribs 21 will serve as guides and will fend the same against accidental side slip with possible resultant accidental gashing of the adjacent bag material, while at the same time, the backing section 24 of the body 20 will so limit the cutting action of the knife, after the loop strands are cut through, as to effectively prevent contact thereof with the bag material and resultant accidental gashing of the latter under such circumstances. Once the loop strands are cut through, the same will pull away from the backing and guide device and will open up so as to release the bag neck and drop the seal body 10 therefrom.

Referring to Figs. 4 and 5 of the drawing, there is shown therein a modified form of the novel backing and guide means embodying however the essential features of this invention. In this form, the device comprises a main body 40 made of a suitable material but preferably made of sheet metal. Said body 40 is provided, along opposite margins thereof, with integral outwardly projecting side flanges 41, constituting portions angular to the plane of said body 40. The free end portions are turned outwardly to provide keeper ribs 42 angular to said flanges 41 and preferably substantially parallel in plane to the plane of said body 40. Formed in said side flanges 41 are openings 43 through which the strands of the tie cord loops 13 and 14 pass, so as to dispose portions of the latter in overlying relation to and across the body 40. If desired one or more corners of the body 40 may be rearwardly turned to provide rearwardly projecting prongs 44, adapted in use to engage the bag material so as to prevent relative displacement of the body 40 as applied thereto. Said prongs 44, of course, may be otherwise formed, if desired.

In Figs. 6 and 7 of the drawing, still another modified form of the novel backing and guide means is shown, the same comprising a main body 50 made of sheet metal or other suitable material. This body is provided with oppositely extending wings 51 integral with and lying in the plane of the body, said wings 51 having extensions springing from opposite margins thereof to provide eye portions 52 through which the strands of the tie cord loops may extend, so as to dispose portions of the latter in overlying relation to and across the intermediate body 50. It will be obvious that since said eye portions 52 project outwardly from the plane of the body 50, that the same will not only engage the tie cord loops but will also act as guides to prevent side slipping deflection of a cutting knife when the latter is operatively applied to the intermediate sections of the tie cord loops as backed by the underlying body 50.

It will be understood, that the general method of assembly with the seal device and the general advantages and operative effects in use are substantially the same with respect to said modified forms of the device as set forth in connection with the first described form thereof. It will also be understood that variations of shape and form other than those above described and shown in the drawing, which must therefore be considered as illustrative and not in a limiting sense.

I claim:

In combination with a bag tie cord adapted to be formed into a constrictive bag neck encircling loop having free end portions subject to imbedding engagement by an applied deformable seal body, of a relatively narrow sheet metal cord backing plate having lateral outwardly offset perforate ear portions through which the bight of the cord loop extends to dispose said plate intermediate the bag material and a short arcuate section of said cord loop but so as to leave the major portions of said cord loop freely flexible for unimpeded close and tight hugging disposition about the constricted bag neck, and said plate having rearwardly projecting prong means to engage the bag neck material so as to anchor said plate against shifting displacement relative to both said cord loop and bag neck.

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