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(54) Guarantee seal.

(57) A guarantee seal of the type that consists of a flexible strip (1), one end of which terminates in a head (2) provided with means that cooperate with means provided on the other end (3) of the strip to prevent said strip from being extracted once it has been inserted into the head, said means of the head consisting of two internal teeth (9), each of which defines a notch (12), and two openings at the bottom, and said means of the opposite end consisting of an elastically deformable terminal in the shape of an arrowhead comprisina two converging branches (6) each of which is provided with teeth (8) at the diverging ends, said teeth cooperating with the notches (12) of the head.

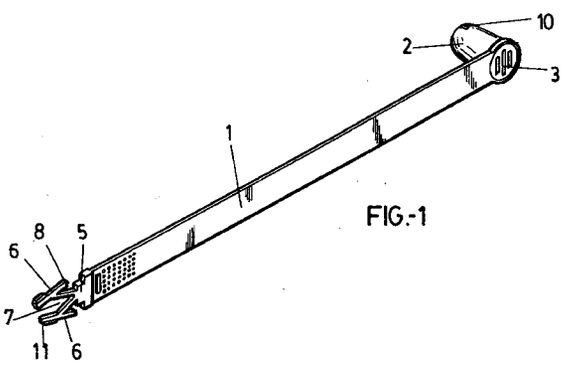

FIG.-1

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The present invention relates to guarantee seal, i.e. a seal which ensures that the container which it protects remains perfectly sealed in such a way that said container can only be opened by breaking the seal, providing clear evidence that such an action has taken place.

BACKGROUND OF THE INVENTION

Seals of this type are known and have the form of a naturally flexible strip, preferably plastic, that terminates at one end in a small grooved head through which the other end passes, said head being provided with fastening means which go through the body of the strip as it passes through said head and which become immovable, i.e. once they have been sealed or fastened it is impossible to open them again without breaking the ring formed by the seal at any point along its length.

In general, these seals become structurally complex if a high level of effectiveness or security is to be achieved.

DESCRIPTION OF THE INVENTION

The guarantee seal of the invention is of the type described above, i.e. formed by a ring which becomes immovable once closed, and has been designed and constructed to achieve optimum guarantees of security by means of an extremely simple structure as well as a simple closing operation.

More particularly, to achieve this the seal proposed by the invention is made of an elongated, flexible body, which may be laminar, such as those described above, or may be have the form of a cord, without affecting the basic concept of the invention, but where in either case one of its ends terminates in a flat terminal and the other end in a small grooved head.

More particularly, the flat terminal defines a kind of elastically deformable arrowhead which converges towards its free end to make it easier to insert into the groove of the head, and on which are provided two rear, lateral, interlocking teeth corresponding to complimentary teeth provided inside the groove of the head, just inside its opening, such that these complimentary teeth of the head at first force the two parts of the flat terminal to converge, by deforming it elastically, until the teeth of said terminal have passed beyond those of the groove, at which point the flat terminal recovers elastically and becomes perfectly adapted inside the groove of the head with the teeth of both elements permanently interlocked, since when the seal is pulled to try and extract the flat terminal from the head, the special configuration of said teeth tends to cause them to become interlocked even more tightly.

Finally, it only remains to be said that although the bottom of the head is substantially closed, to constitute a stop to limit the penetration of the flat terminal, it is however provided with small lateral holes, facing the opening, through which the lateral branches of the flat terminal emerge slightly as said terminal is inserted.

BRIEF DESCRIPTION OF THE DRAWINGS

In order that the present invention be better understood, the accompanying drawings show by way of non-limiting example one practical embodiment of the invention.

In the drawings:

Figure 1 is a perspective view of a guarantee seal according to the object of the present invention.

Figure 2 is a lateral elevation view of the same seal, showing what will be its external face in the closed position.

Figure 3 is again an elevation view of a detail of the same seal, showing the face opposite to that of figure 2.

Figure 4 shows a profile view of the same seal.

Figure 5 is a cross section of the head taken across the line A-B of figure 4.

Figure 6 is a perspective view of the same seal, this time in the closed position.

Finally, figure 7 is a cross section detail through the head, similar to figure 5 but with the seal in the closed position.

DESCRIPTION OF A PREFERRED EMBODIMENT

As can be seen in the figures, the guarantee seal proposed by the invention is made of an elongated, flexible body 1, which may have the form of a band, as in the embodiment shown in the figures, or that of a cord, the shape of said flexible, elongated body adapting to the specific requirements of each case, one end of said elongated body terminating in either case in a small, basically cylindrical grooved head 2 provided with a diametral groove 3 whose opening 4 lies in the plane of the elongated body 1.

The other end of the body 1 terminates in a flat terminal 5 which defines a kind of arrowhead comprising two lateral branches 6 that converge towards the free end and are separated by an intermediate cutout 7 to make it more flexible, the rear ends of said branches ending in interlocking teeth 8 that diverge towards the rear and which correspond to complimentary teeth 9 provided inside the groove 3 of the head, just inside its opening 4, the bottom of said groove 3 being provided with small holes 10 through which the free ends 11 of said branches 6 of the flat terminal, which constitutes the arrowhead or fixing element, emerge slightly.

According to this structure, and as can be seen in particular in figure 7, the arrowhead or flat terminal

5, which is elastically deformed as it is inserted into the head 2, recovers elastically once the rear, lateral teeth 8 have passed beyond the complimentary teeth of the head, such that the free ends of said teeth 8 become permanently engaged in the notches 12 defined immediately behind the teeth 9 of the head, there being no means of gaining access to these interlock points since the holes 10 are "filled" by the ends 11 of the lateral branches of the arrowhead, thereby guaranteeing the inviolability of the seal.

The present description is considered to be more than sufficient for any expert in the field to understand the scope of the invention and the advantages which it provides.

The shapes, sizes and arrangement of the elements of which the invention consists, as well as the materials of which they are made, are independent of the object of the invention providing they do not affect its basic concept.

The terms used should be considered in a general and non-limiting sense.

Claims

1. A guarantee seal of the type that consists of an elongated, flexible body (1) in the form of a band or a cord normally made of plastic, characterized essentially in that one of its ends incorporates a small head (2) provided with a transverse groove (3), whilst the other end of said elongated, flexible body incorporates a flat terminal (5) which defines a kind of elastically deformable arrowhead that can be snap-fitted into the groove (3) of the head (2) such that after it has been fitted it cannot be removed.

2. A guarantee seal according to claim 1, characterized in that the flat terminal (5) is provided with two lateral branches (6) that converge towards the free end, a front cutout (7) being defined between them to make the elastic deformation of the terminal easier, said branches each ending in diverging rear, lateral teeth (8) which constitute the means of interlocking the head (2), whilst said head (2) incorporates lateral complimentary teeth (9), just inside the opening (4), behind which notches or sharp steps (12) are defined for engaging the teeth (8) of the flat terminal (5).

3. A guarantee seal according to claim 1, characterized in that the groove (3) of the head (2), whose size and shape are approximately the same as those of the flat terminal (5), is provided at the bottom with small holes (10) that lead to the outside and through which pass the front ends (11) of the lateral branches (6) of the flat terminal (5), said holes (10) being totally blocked by said branches (6) as a result of snap-fitting the terminal into the head.

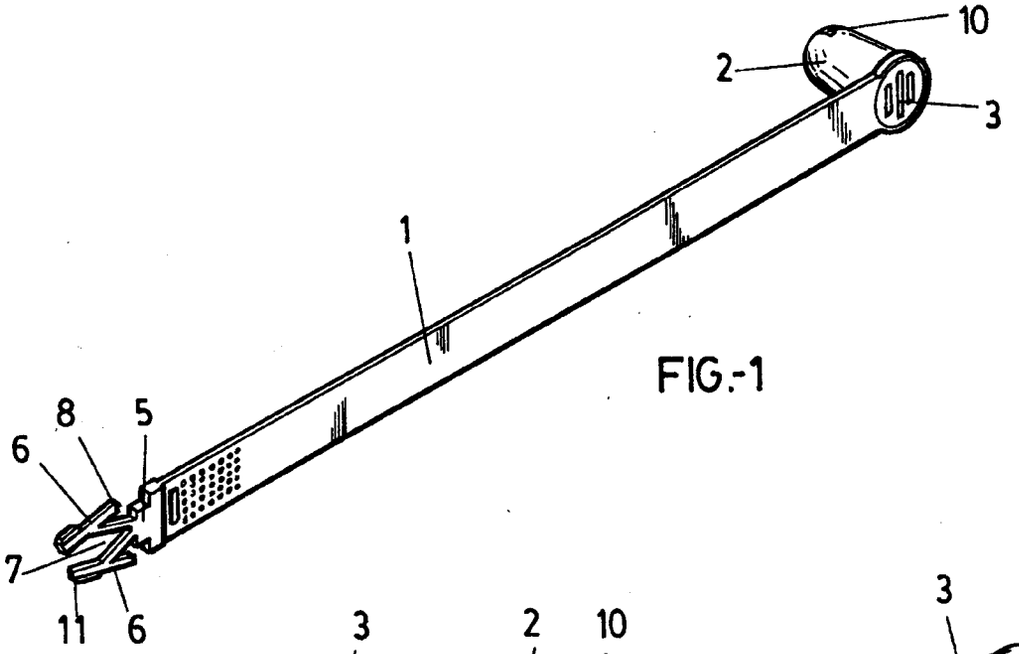


FIG.-1

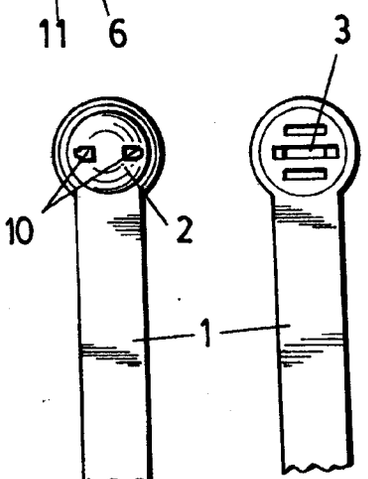


FIG.-2

FIG.-3

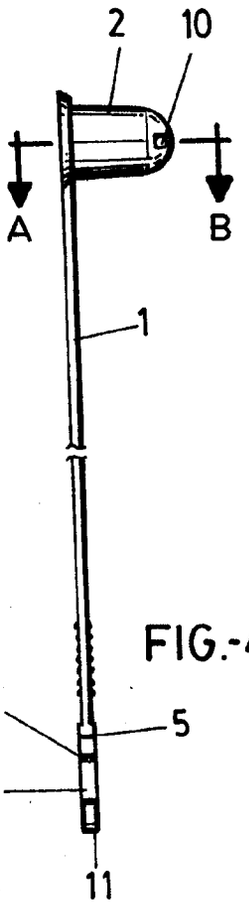


FIG.-4

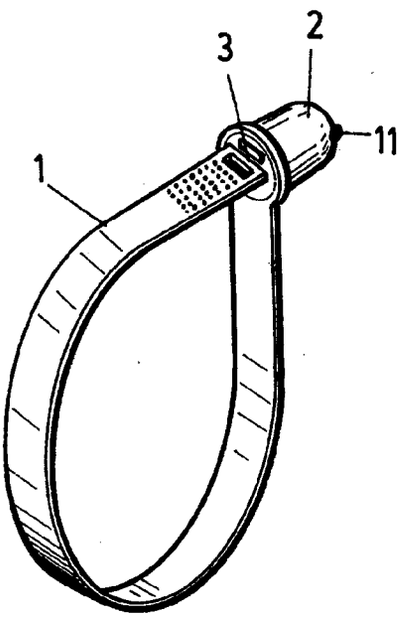
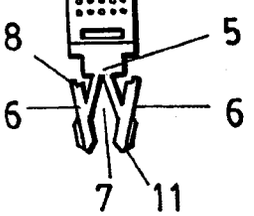


FIG.-6



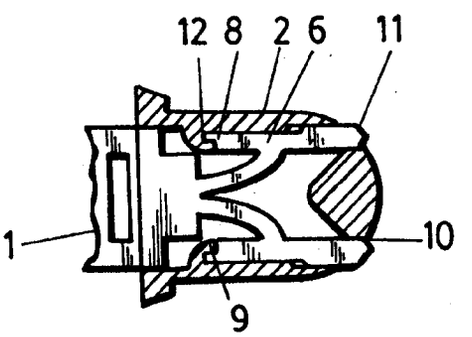


FIG.-7
A-B

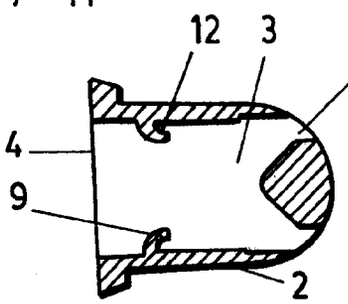


FIG.-5
A-B

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 94 50 0124

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US-A-3 367 701 (N. WENK) * the whole document * ---	1-3	G09F3/03
A	FR-A-2 140 272 (DE LIMA CASTRO NETO) * the whole document * -----	1-3	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

G09F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	26 October 1994	Gallo, G

CATEGORY OF CITED DOCUMENTS

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