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CLAMPABLE CLOSURE SEAL FOR BAND-LIKE ENCLOSURE HOOPS

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Fig. 1

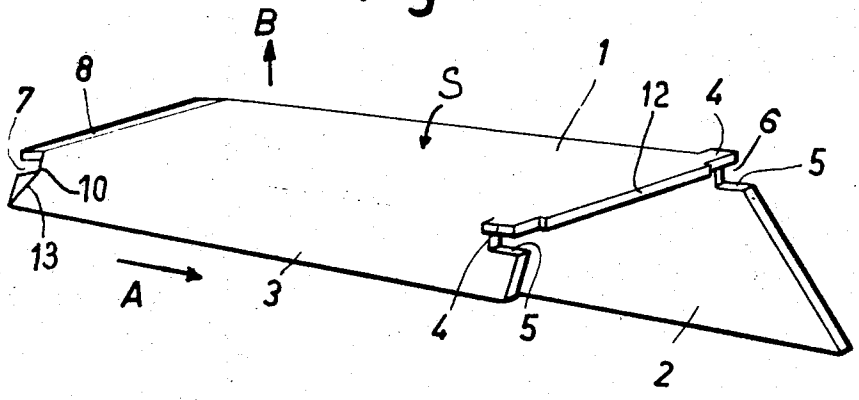


Fig. 2

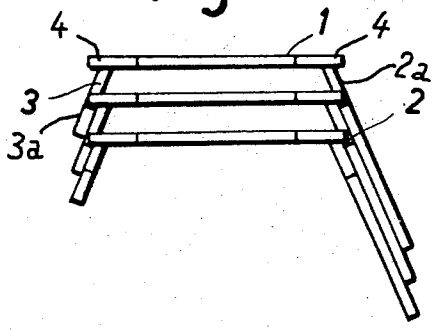
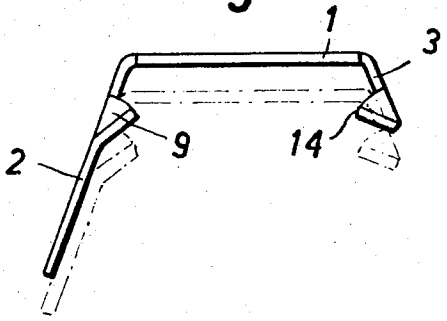


Fig. 3



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CLAMPABLE CLOSURE SEAL FOR BAND-LIKE ENCLOSURE HOOPS

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ABSTRACT OF THE DISCLOSURE

A stack of clampable closure seals for band-like enclosure hoop ends wherein the stack is formed of a plurality of similarly constructed open-ended channel-shaped closure seals, each of which has a back portion from the side edge of which there extends longitudinally, downwardly and outwardly directed side portions; laterally projecting oppositely directed retaining flaps extend from the corners of one end of the closure seal in the plane of the back portion, and beneath each laterally directed flap there is located a notch into which the flaps of an adjacent closure seal are received; notches are provided in each side portion adjacent the other end of the seal and into these notches there is received triangular retaining flaps formed on the side portions of the seal. The oppositely directed flaps, the triangular flaps and the cooperating notches permit separation of the seals from the stack solely by longitudinal movement in one direction.

The present invention has reference to an improved clampable closure seal or sleeve for band-like enclosure hoops or straps. More specifically, the inventive clampable closure seal is of the type constructed and an open-ended channel-shaped closure element having a back wall or portion, to the lengthwise edges of which, there are connected two side walls or portions projecting at an inclination with respect to said back portion. The back wall and the two side walls are formed of a single piece, in other words, define an integral or unitary element, and each of the inventive closure seals is provided with holding means for detachably retaining neighboring closure seals in a stable stack when such are arranged in stacked formation.

As is known, such closure seals are generally inserted in the form of a stack in a seal magazine of a closure apparatus used for hooping objects with flexible bands formed into hoops and by means of which the closure seal is applied to the hoop ends. According to the prior art, during transportation of such closure seals, that is, before they are placed into the seal magazine of the closure apparatus, these seals are held together by means of a wire loop or runner which is piercingly inserted through a hole provided at the back portion of each closure seal of the stack. After fabrication of these closure seals, this wire loop must be manually threaded through the hole at the back portion of each closure seal in the stack, and when such stack is inserted in the closure apparatus, it must again be manually removed. This not only increases the cost of manufacture of the closure seals, but also renders their use more difficult, particularly then if, for example, only a portion of the stack is to be introduced into the closure apparatus. Moreover, the hole or aperture appearing at the back portion or wall of the closure seal weakens such.

Also known to the prior art are closure seals incorporating projections and recesses at their side walls or portions and which fit into one another when these closure seals are stacked. Such, however, disturb the flush fitting

of the side legs or portions with one another when the closure seals are in stacked position and can also prove to be a hinderance after these legs or side portions have been flexed about the closure hoop or strap. Moreover, such projections are also a disadvantage because they prevent the formation of a stable stack of closure seals and, apart from this, are suitable only for closure seals having a smooth inner surface. Closure seals whose inner surface is roughened or provided with numerous serrations or little teeth so as to be capable of use with, for instance, non-metallic hoops or straps are not suitable for this type of stacking.

Accordingly, it is a primary object of this invention to provide an improved clampable closure seal for enclosure hoops which effectively eliminates the above-mentioned disadvantages.

A further important object of this invention is to provide an improved construction of closure seal which can be easily placed into stacked formation and retained in a stable stack by the provision of holding means which cooperate with each two neighboring closure seals of the stack and wherein the holding means are integrally formed at each closure seal itself.

Another considerable object of this invention is to provide an improved construction of closure seal which can be economically manufactured and assembled into stacked formation so as to form a very stable stack for handling purposes, yet allows for easy separation of each individual closure seal from the stack at such time as they are applied to the hoop ends of the enclosure hoop which are to be interconnected.

In order to implement these and still further objects of the invention which will become more readily apparent as the description proceeds, each inventive closure seal is provided with holding means which cooperates with the holding means of a neighboring closure seal of a stack of them, and wherein the holding means of each closure seal is located at its back portion and also at at least one of its side portions. The holding means of two neighboring closure seals of the stack engage with one another in such a manner that these closure seals can only be removed from the stack by displacement thereof parallel to the lengthwise direction of the back portion of said closure seals.

By virtue of the inventive construction of the closure seals, it is possible to form a stack of them with the seals flushly stacked upon one another, and the stack itself does not have the tendency of falling apart or the individual closure seals of the stack becoming improperly aligned or positioned. Furthermore, only a small force is necessary for removing the individual closure seals from the stack in the closure apparatus and to push such into their closure position for application to the hoop ends. This is namely of importance with automatic or semi-automatic closure apparatuses in order to prevent jamming in the seal magazine of the apparatus.

Other features, objects and advantages of the invention will become apparent by reference to the following detailed description and drawing in which:

FIGURE 1 is a perspective view of a clampable channel-shaped closure seal or sleeve shown in open or non-clamped position;

FIGURE 2 is an end view of a stack of closure seals of the type shown in FIGURE 1; and

FIGURE 3 is an end view of the closure seal of FIGURE 1 viewed from the opposite end of the stack shown in FIGURE 2.

Describing now the drawing it will be understood that the clampable closure seal or sleeve S shown in FIGURES 1 to 3 is shown in its open position, that is, prior to engaging about the hoop ends of the enclosure hoop to which it is to be applied. This closure seal S is shown, in

the exemplary embodiment, to be constructed as an open-ended channel-shaped closure element which incorporates a back wall or portion **1**, a relatively wide side wall or portion **2** and a narrower side portion **3**. Both side portions **2** and **3** are inclined with respect to one another, in other words, diverge slightly downwards and outwards from the back portion **1** and enclose an angle of about 42° to 52°. Both of these side portions **2** and **3**, during such time as the closure seal is clamped about the hoop ends, are placed about the enclosure hoop in the usual manner, so that there appears a clamp which fixedly holds together these hoop ends. When using non-metallic enclosure hoops, it is advantageous to roughen or else provide the inner surface of these side portions **2** and **3** with fine teeth in order to increase the adherence of the formed clamp with the engaged hoop ends. It should also be appreciated that the back portion **1** and the side portions **2** and **3** are formed of one piece to define an integral or unitary element.

It will also be recognized that at one end or edge **12** of the back wall or portion **1** there is located at each corner a laterally protruding, oppositely directed, retaining flap member **4** which extends in the linear extension of the plane containing this back portion **1**. Thus, these retaining flaps **4** each project a small distance past a respective plane taken through the outermost surface of each of the associated side portions **2** and **3**, generally indicated by the surfaces **2***a* and **3***a* respectively, as clearly evident from FIGURE 2. Beneath these lateral protruding or projecting flaps **4** there is located in each side portion **2** and **3** a respective punched-out or otherwise formed, open recess or notch **6**. Each notch **6** is rearwardly directed from the marginal edge of its associated side wall or portion and possesses a lower edge **5** extending parallel or approximately parallel to the back portion.

In the stacked condition or position of these closure seals S, the projecting retaining flaps **4** of one closure seal engage with the approximately square open notches or grooves **6** of a neighboring closure seal and thus bear upon the corresponding lower edge **5**. This results in securing against separation of the individual closure seals of a stack perpendicular to the plane of the back portion **1**. The height and/or position of the notch or notches **6** is so dimensioned or calculated that when the side portions of two neighboring clamping seals lie flush upon one another, the retaining flaps **4** can be pushed without play or, in fact, while overcoming a certain small resistance onto the cooperating edge **5** of the associated notch **6**. FIGURE 2 also clearly shows that when the closure seals S are arranged in stacked formation, the back portion **1** of each of them are spaced from one another.

At the opposite end of the side portions **2** and **3** there are also provided similarly constructed and arranged open grooves or notches **7**. The marginal edge or retaining lip portion **8** of the back portion **1** at this end of the closure seal, and here shown to extend across the width thereof, projects past the rear edge **10** of each of these notches **7** and is advantageously slightly bent in downward direction. Beneath both notches **7** there is located a respective retaining flap **9**, here shown possessing a substantially triangular configuration, and which is formed from the material of the side portions **2** and **3** and bent inwards, as best recognized by inspecting FIGURE 3. In the stacked condition of the closure seals S of FIGURE 2, each of these retaining flaps **9** engages beneath the retaining lip **8** of the lower disposed neighboring closure seal and thus not only prevents separation of the closure seals perpendicular to the plane of the back portion **1**, but also a further displacement of the neighboring closure seals in one lengthwise direction, since the corners **14** of the flaps **9** bear against the rear edges **10** of the notches **7**. The depth of the notches **7** is selected together with the position of the flaps **9** such that the marginal end or edge **12** of each closure seal come to lie vertically above one another in superimposed fashion.

In this manner it is possible to easily stack a number of closure seals S constructed in the foregoing manner, and they can then, when used, be individually separated from the stack shown for instance in FIGURE 2 and located in the seal magazine of the closure apparatus, by moving an appropriate, conventional slide or separator element which moves these seals for instance in the separation direction depicted by arrow A in FIGURE 1 when the lowermost seal of the stack each time is to be removed from such stack. Of course, movement of the seals would be in the opposite direction if the uppermost seal is separated from the stack. It is also conceivable to use the stack in a position inverted from that shown in FIGURE 2.

Although the foregoing description of the invention closure seal S is directed to a preferred embodiment, naturally, a number of modifications and variations of the described seal are possible and will readily suggest themselves to those skilled in the art. For instance, the retaining flaps **9** can possess a configuration other than the triangular one disclosed, for instance, can be formed as a tongue member with parallel, lateral edges, the free ends of which, for example are rounded or pointed, whereby such tongue is then preferably bent straight inwards, in other words, parallel or substantially parallel to the marginal edge **12**. It would also be possible to change in analogous manner the configuration of the notch or notches **7**, whereby, of course, the function must be analogously fulfilled in that the flaps or tongues actually engage with the notches **7** and due to the cooperation of both of these elements limit a lengthwise relative displacement of two directly superimposed seals in the one direction. Moreover, while in the preferred embodiment the retaining means are advantageously provided at each of the four corners of the depicted closure seal, they could be, for instance, only provided at two diagonally disposed corners, or at the corners lying at only one side, in other words, at only one of the side portions **2** or **3**, or only at one end of one side portion, or in other possible combinations.

Thus, while there is shown and described present preferred embodiments of the invention, it is to be distinctly understood that the invention is not limited thereto but may be otherwise variously embodied and practised within the scope of the following claims.

What is claimed is:

1. A stack of clampable closure seals for band-like enclosure hoops wherein the stack is formed of at least two similarly constructed open-ended channel-shaped closure seals, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being provided with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means provided at its back portion and retaining means provided at at least one side portion in close proximity to said back portion, said retaining means at said back portion of a given open-ended channel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in every direction except in a direction parallel to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals.

2. A stack of clampable closure seals as defined in claim **1**, wherein said retaining means at the back portion of each closure seal is located at at least one end of the open-ended channel-shaped closure seal and comprises

at least one laterally protruding retaining flap located adjacent a corner of said one end, said retaining means at said at least one side portion of each open-ended channel-shaped closure seal being a longitudinally extending notch closed at one of its ends and open at its other end and located at said region of said one end and beneath the laterally protruding retaining flap, said laterally protruding retaining flap of a given open-ended channel-shaped closure seal of the stack engaging with said notch of a neighboring stacked open-ended channel-shaped closure seal.

3. A stack of clampable closure seals for band-like enclosure hoops wherein the stack is formed of at least two similarly constructed open-ended channel-shaped closure seals, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being providing with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means provided at its back portion and retaining means provided at at least one side portion, said retaining means at said back portion of a given open-ended channel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in every direction except in a direction parallel to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals, said retaining means at the back portion of each closure seal is located at at least one end of the open-ended channel-shaped closure seal and comprises at least one laterally protruding retaining flap located adjacent a corner of said one end, said retaining means at said at least one side portion of each open-ended channel-shaped closure seal being an open notch located at said region of said one end and beneath the laterally protruding retaining flap, said laterally protruding retaining flap of a given open-ended channel-shaped closure seal of the stack engaging with said open notch of a neighboring stacked open-ended channel-shaped closure seal, at least the corner at the other end of each open-ended channel-shaped closure seal diagonally situated with respect to said corner of said one end is provided with at least one retaining lip at its back portion and at its associated side portion with an inwardly directed retaining flap.

4. A stack of clampable closure seals for bandlike enclosure hoops wherein the stack is formed of at least two similarly constructed open-ended channel-shaped closure seals, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being provided with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means provided at its back portion and retaining means provided at at least one side portion, said retaining means at said back portion of a given open-ended chanel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in every direction except in a direction parallel to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals, said retaining means at the back portion of each closure seal is located at at least one end of the open-ended channel-shaped closure seal and comprises at least one laterally protruding retaining flap located adjacent a corner of said one end, said retaining means at said at least one side portion of each open-ended channel-shaped closure seal being an open notch located at said region of said one end and beneath the laterally protruding retaining flap, said laterally protruding retaining flap of a given open-ended channel-shaped closure seal of the stack engaging with said open notch of a neighboring stacked open-ended channel-shaped closure seal, at least the coner at the other end of each open-ended channel-shaped closure seal situated at the same side as said corner at said one end is provided with at least one retaining lip at its back portion and at its associated side portion with an inwardly directed retaining flap.

5. A stack of clampable closure seals for band-like enclosure hoops wherein the stack is formed of at least two similarly constructed open-ended channel-shaped closure seals, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being provided with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means provided at its back portion and retaining means provided at at least one side portion, said retaining means at said back portion of a given open-ended channel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in every direction except in a direction parallel to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals, said retaining means at the back portion of each closure seal is located at both ends of the open-ended channel-shaped closure seal and comprises a pair of laterally protruding, oppositely directed retaining flaps located adjacent each corner of one end and a retaining lip extending across the width of said open-ended channel-shaped closure seal at the other end thereof, each of said side portions being provided with retaining means which comprises an open notch located at each corner of the region of said one end and beneath the associated laterally protruding retaining flap and at the region of said other end at each corner with an inwardly directed retaining flap, said laterally protruding, oppositely directed retaining flaps of a given open-ended channel-shaped closure seal of the stack engaging with said open notches of a neighboring stacked open-ended channel-shaped closure seal and the retaining lip of said given open-ended channel-shaped closure seal engaging with said inwardly directed retaining flaps of said neighboring stacked open-ended channel-shaped closure seal. ,

6. A stack of clampable closure seals as defined in claim 5, wherein each of said side portions is also provided with an open notch at each corner of the region of said other end.

7. A stack of clampable closure seals as defined in claim 5, each of said open notches at said one end having a bounding edge extending substantially parallel to the associated back portion, said laterally protruding, oppositely directed retaining flaps of a given open-ended channel-shaped closure seal of the stack engaging with the bounding edges of the associated open notches of a superimposed neighboring stacked open-ended channel-shaped closure seal and the retaining lip of said given open-ended channel-shaped closure seal being engaged therebeneath by said inwardly directed retaining flaps of said superimposed

neighboring stacked open-ended channel-shaped closure

8. A clampable closure seal for band-like enclosure hoops formed as an open-ended channel-shaped closure element which incorporates a back wall having two lengthwise extending sides and a side wall connected with each said lengthwise extending side of said back wall, said side walls and said back wall being integral with one another to form a unitary element, holding means provided for said open-ended channel-shaped closure element capable of engaging with the holding means of an identical neighboring open-ended channel-shaped closure element when a plurality of such clampable closure seals are placed in stacked formation so as to form a stable stack which still enables separation of one clampable closure seal after the other from the stack yet only in one direction parallel to the lengthwise direction of the back wall of said open-ended channel-shaped closure element, said holding means comprising retaining means provided at its back wall and retaining means provided at at least one side wall.

9. A clampable closure seal for band-like enclosure hoops as defined in claim 8, wherein said retaining means at the back wall of said clampable closure seal is located at at least one end of the open-ended channel-shaped closure element and comprises at least one laterally protruding retaining flap located near a corner of said one end, said retaining means at said at least one side wall being an open notch located at said region of said one end and beneath said at least one laterally protruding retaining flap.

10. A stack of clampable closure seals for band-like encloure hoops wherein the stack is formed of at least two similarly constructed open-ended channel-shaped closure seals, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being provided with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means privided at its back portion and retaining means provided at at least one side portion, said retaining means at said back portion of a given open-ended channel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in every direction except in a direction parallel to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals, said retaining means at the back portion of each closure seal comprises a pair of laterally protruding, oppositely directed retaining flaps located at each corner of one end and a retaining lip at at least one corner of the other end, each of said side portions being provided with retaining means at said one end which comprises an open notch located at each corner of the region of said one end and beneath the associated laterally protruding, oppositely directed retaining flaps and at the region of said other end at said at least one corner with an inwardly directed retaining flap.

11. A clampable closure seal for band-like enclosure hoops formed as an open-ended channel-shaped closure element which incorporates a back wall having two lengthwise extending sides and a side wall connected with each said lengthwise extending side of said back wall, said side walls and said back wall being integral with one another to form a unitary element, holding means provided for said open-ended channel-shaped closure element capable of engaging with the holding means of an identical neighboring open-ended channel-shaped closure element when a plurality of such clampable closure seals are placed in stacked formation so as to form a stable stack which still enables separation of one clampable closure seal after the other from the stack yet only in a direction parallel to the lengthwise direction of the back wall of said open-ended channel-shaped closure element, said holding means comprising retaining means provided at its back wall and retaining means provided at at least one side wall, said retaining means at the back wall of said clampable closure seal is located at at least one end of the open-ended channel-shaped closure element and comprises at least one laterally protruding retaining flap located near a corner of said one end, said retaining means at said at least one side wall being an open notch located at said region of said one end and beneath the laterally protruding retaining flap, at least the corner at the other end of said open-ended channel-shaped closure element diagonally situated with respect to said corner of said one end is provided with at least one retaining lip at its back well and at its associated side wall with an inwardly directed retaining flap.

12. A clampable closure seal for band-like enclosure hoops formed as an open-ended channel-shaped closure element which incorporates a back wall having two lengthwise extending sides and a side wall connected with each said lengthwise extending side of said back wall, said side walls and said back wall being integral with one another to form a unitary element, holding means provided for said open-ended channel-shaped closure element capable of engaging with the holding means of an identical neighboring open-ended channel-shaped closure element when a plurality of such clampable closure seals are placed in stacked formation so as to form a stable stack which still enables separation of one clampable closure seal after the other from the stack yet only in a direction parallel to the lengthwise direction of the back wall of said open-ended channel-shaped closure element, said holding means comprising retaining means provided at its back wall and retaining means provided at at least one side wall, said retaining means at the back wall of said clampable closure seal is located at at least one end of the open-ended channel-shaped closure element and comprises at least one laterally protruding retaining flap located near a corner of said one end, said retaining means at said at least one side wall being an open notch located at said region of said one end and beneath the laterally protruding retaining flap, at least the corner at the other end of said open-ended channel-shaped closure element situated at the same side as said corner at said one end is provided with at least one retaining lip at its back wall and at its associated side wall within an inwardly directed retaining flap.

13. A clampable closure seal for band-like enclosure hoops formed as an open-ended channel-shapel closure element which incorporates a back wall having two lengthwise extending sides and a side wall connected with each said lengthwise extending side of said back wall, said side walls and said back wall being integral with one another to form a unitary element, holding means provided for said open-ended channel-shaped closure element capable of engaging with the holding means of an identical neighboring open-ended channel-shaped closure element when a plurality of such clampable closure seals are placed in stacked formation so as to form a stable stack which still enables separation of one clampable closure seal after the other from the stack yet only in a direction parallel to the lengthwise direction of the back wall of said open-ended channel-shaped closure element, said holding means comprising retaining means provided at its back wall and retaining means provided at at least one side wall, said retaining means at the back wall of said clampable closure seal is located at both ends if the open-endel channel-shaped closure element and comprises a pair of laterally protruding, oppositely directed retaining flaps located at each corner of one end and at least one retaining lip at the other end, each of said side

walls being provided with retaining means which comprises an open notch located at each corner of the region of said one end and beneath the associated laterally protruding, oppositely directed retaining flap and at the region of said other end at each corner with an inwardly directed retaining flap.

14. A clampable closure seal for band-like enclosure hoops as defined in claim 13, wherein each of said side walls is also provided with an open notch at each corner at the region of said other end.

15. A clampable closure seal for band-like enclosure hoops formed as an open-ended channel-shaped closure element which incorporates a back wall having two lengthwise extending sides and a side wall connected with each said lengthwise extending side of said back wall, said side walls and said back wall being integral with one another to form a unitary element, holding means provided for said open-ended channel-shaped closure element capable of engaging with the holding means of an identical negibhoring open-ended channel-shaped closure element when a plurality of such clampable closure seals are placed in stacked formation so as to form a stable stack which still enables separation of one clampable closure seal after the other from the stack yet only in a direction parallel to the lengthwise direction of the back wall of said open-ended channel-shaped closure element, said holding means comprising retaining means provided at its back wall and retaining means provided at at least one side wall, said retaining means at the region of the back wall of each clampable closure seal comprises a pair of laterally protruding, oppositely directed retaining flaps located at each corner of one end and at least one retaining lip at at least one corner of the other end, each of said side walls being provided with retaining means at said one end which comprises an open notch located at each corner of the region of said one end and beneath the associated laterally protruding, oppositely directed retaining flap and at the region of said other end at said at least one corner with an inwardly directed retaining flap.

16. A stack of clampable closure seals for band-like enclosure hoops wherein the stack is formed of at least

two similarly constructed open-ended channel-shaped closure seal, each open-ended channel-shaped closure seal having a back portion with two lengthwise extending marginal sides, a side portion connected with each lengthwise extending marginal side of said back portion, said side portions and said back portion being formed as an integral element, each open-ended channel-shaped closure seal being provided with holding means cooperating with the holding means of a neighboring open-ended channel-shaped closure seal for keeping the stack intact, said holding means of each open-ended channel-shaped closure seal comprising retaining means provided at its back portion and retaining means provided at at least one side portion, said retaining means at said back portion of a given open-ended channel-shaped closure seal cooperating with the retaining means at said one side portion of the neighboring open-ended channel-shaped closure seal of the stack to prevent separation of said two open-ended channel-shaped closure seals from one another in very direction except in a direction paralle to the lengthwise direction of the back portion of said open-ended channel-shaped closure seals, said retaining means at the back portion of each closure seal is located at at least one end of the open-ended channel-shaped closure seal and comprises at least one laterally protruding retaining flap located adjacent a corner of said one end, said retaining means at said at least one side portion of each open-ended channel-shaped closure seal being an open notch located at said region of said one end and beneath the laterally protruding retaining flap, said laterally protruding retaining flap of a given open-ended channel-shaped closure seal of the stack engaging with said open notch of a neighboring stacked open-ended channel-shaped closure seal.

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