

EASY OPEN APPARATUS FOR MEDICAMENT STORAGE CARTON**CROSS-REFERENCE TO RELATED APPLICATION**

[0001] The present application claims priority to United States Patent Application No. 63/073,800 filed September 2, 2020. The priority application is hereby incorporated by reference.

FIELD OF DISCLOSURE

[0002] The present disclosure relates to medicament storage cartons and, more particularly, to storage cartons.

BACKGROUND

[0003] Many medicament storage cartons are used for storing personal medicament dosages used for home use. These storage cartons are often made to hold one, two, three, four, or more medicament dosages. The cartons used for storing the medicament dosages need to be sealed to prevent tampering with the contents of the carton prior to first personal use. As a result, most medicament storage cartons are sealed with tamper evident closures, such as closure labels that will damage the carton if the closure labels are tampered with.

[0004] Medicament storage containers using tamper evident seals can be difficult to open without either using a cutting tool or damaging the packaging. The cutting tool can be dangerous to use and, in some instances, the damage to the carton leaves the medicament dosages stored in the carton exposed to the exterior environment. These medicament storage cartons may be more secure and provide evident proof of tampering, but may be difficult to open.

SUMMARY

[0005] The present disclosure is directed to a carton for medicament storage. The carton includes a bottom box having a bottom wall, a first sidewall, a second sidewall, a back wall, and a front wall. The carton also includes a lid, hingedly connected to the back wall between an open position and a closed position, including a third sidewall adjacent the first sidewall, a fourth sidewall adjacent the second sidewall, and a second front wall adjacent the first front wall. Additionally, the bottom box is disposed within the third sidewall, fourth sidewall, and the second front wall when the lid is in the closed position. The carton also includes a release tab comprising a portion of the second front wall and being defined between a bottom edge of the second front wall and a perforated line in the second front wall. Also, when the lid is in the open position and the closed position, the release tab is secured to the bottom box. Additionally, when the lid is in the open position, the release tab is separated along the perforated line from the second front wall.

[0006] The present disclosure is directed to a carton for medicament storage. The carton includes a bottom box having a bottom wall, a first sidewall, a second sidewall, a back wall, and a front wall. The carton also includes an lid, hingedly connected to the back wall between an open position and a closed position, including a third sidewall adjacent the first sidewall, a fourth sidewall adjacent the second sidewall, and a second front wall adjacent the first front wall. Additionally, the bottom box is disposed within the third sidewall, fourth sidewall, and the second front wall when the lid is in the closed position. The carton also includes a release tab comprising a portion of the second front wall and being defined between a bottom edge of the second front wall and a perforated line in the second front wall. Also, when the lid is in the open position and the closed position, the release tab is secured to the bottom box via an adhesive label. Additionally, when the lid is in the open position, the release tab is separated along the perforated line from the second front wall.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] It is believed that the disclosure will be more fully understood from the following description taken in conjunction with the accompanying drawings. Some of the drawings may have been simplified by the omission of selected elements for the purpose of more clearly showing other elements. Such omissions of elements in some drawings are not necessarily indicative of the presence or absence of particular elements in any of the exemplary embodiments, except as may be explicitly delineated in the corresponding written description. Also, none of the drawings are necessarily to scale.

- [0008] FIG. 1 is a plan view of a die cut of a medicament storage carton including an easy open push feature.
- [0009] FIG. 2 is a perspective view of a medicament storage carton including the easy open feature of FIG. 1.
- [0010] FIG. 3 is a plan view of an easy open feature including a release tab constituting a push open feature.
- [0011] FIG. 4 is a perspective view of the medicament storage carton of FIG. 2, additionally including a closure label to seal the medicament storage carton.
- [0012] FIG. 5 is a perspective view of pressing the easy open feature of the medicament storage carton of FIG. 2.
- [0013] FIG. 6 is a perspective view of the medicament storage carton of FIG. 2, with the easy open feature detached from the outer front wall.
- [0014] FIG. 7 is a plan view of a die cut of a medicament storage carton including an easy open push-then-pull feature.
- [0015] FIG. 8 is a perspective view of the medicament storage carton including the easy open feature of FIG. 7.
- [0016] FIG. 9 is a plan view of the easy open feature of FIG. 7 including a release tab constituting a push-then-pull open feature.
- [0017] FIG. 10 is a perspective view of the medicament storage carton of FIG. 7 additionally including a closure label to seal the medicament storage carton.
- [0018] FIG. 11 is a perspective view of pressing the push-then-pull easy open feature of the medicament storage carton of FIG. 7.
- [0019] FIG. 12 is a perspective view of the medicament storage carton of FIG. 8, with the easy open feature detached from the outer front wall.
- [0020] FIG. 13 is a plan view of a die cut of an alternative medicament storage carton, with an easy open push feature.
- [0021] FIG. 14 is a perspective view of the alternative medicament storage carton of FIG. 13, with the easy open push feature.
- [0022] Skilled artisans will appreciate that elements in the figures are illustrated for simplicity and clarity and have not necessarily been drawn to scale. For example, the dimensions and/or relative positioning of some of the elements in the figures may be exaggerated relative to other elements to help to improve understanding of various embodiments of the present invention. Also, common but well-understood elements that are useful or necessary in a commercially feasible embodiment are often not depicted in order to facilitate a less obstructed view of these various embodiments. It will further be appreciated that certain actions and/or steps may be described or depicted in a particular order of occurrence while those skilled in the art will understand that such specificity with respect to sequence is not actually required. It will also be understood that the terms and expressions used herein have the ordinary technical meaning as is accorded to such terms and expressions by persons skilled in the technical field as set forth above except where different specific meanings have otherwise been set forth herein.

DETAILED DESCRIPTION

[0023] Medicament storage cartons store and protect dosages of medicament for home usage. One such medicament storage carton includes a lidded carton. A lidded carton can include, for example, an overlid carton (i.e., a carton with an overlid) or an underlid carton (i.e., a carton with an underlid). Such a carton can include a bottom box hingedly connected to a lid having sidewalls and a front wall that overlaps the sidewalls and front wall of the bottom box. These cartons are useful to protect the medicament dosages during transportation and also secure the medicament from tampering. These cartons are secured from tampering because the cartons are sealed with tamper evident seals. As a result, a carton having a broken seal or damaged

exterior may indicate the contents of the carton have been tampered with and the medicament may be unsafe to use. However, while the security provided by the tamper evident seals is important, it makes opening the medicament storage carton difficult.

[0024] The easy open apparatus for medicament storage cartons of the present disclosure provides improved security while also making the medicament storage container user friend and highly accessible. For example, instead of a user needing to tear open the carton to access the medicament or use a sharp cutting tool to cut the tamper evident seal, the carton can include an easy open feature that both maintains all tamper evident seal integrity during shipping and storage while making the medicament storage carton easy to open.

[0025] The apparatus of the present disclosure includes providing a release tab on the front wall of the lid. This release tab can detach from the front wall and separate a tamper evident closure label, attached to both the release tab and the bottom of storage carton, from the lid front wall and allow the medicament storage carton to be opened. As a result, the user is able to detach the release tab away from the lid front wall and does not need to cut the closure label or break apart the storage carton. The storage carton of the present disclosure additionally includes tabs disposed on the bottom box of the storage carton which make the storage carton selectively closeable after the closure label has been detached from the lid.

[0026] The apparatus of the present disclosure can be incorporated into any carton style or design. Such carton designs include, but are not limited to, open-faced cartons slidably received in and enclosed by a carton sleeve, cartons with removable tops, sealable cylinders, etc. For example, the apparatus of the present disclosure can include providing one or more release tabs on a medicament storage carton. For example, instead of a hingedly attached lidded carton, the medicament storage carton could include a bottom box and a top box separate from the bottom box. In such an example, the top box could include a first and second release tab and a closure label for each release tab. As a result, the user is able to detach each of the first and second release tabs away from the top box. Accordingly, the release tab can be incorporated into any carton style or design.

[0027] FIG. 1 is a plan view of a die cut 100 of a medicament storage carton 102 including an easy open feature 104. The carton 102 is made from a unitary material. For example, the carton 102 may be made of a paperboard, cardboard, matboard, or similar materials. However, the carton 102 can be made from several pieces glued or otherwise secured together. The carton 102 includes a plurality of fold lines 106, dividing the carton 102 into a plurality of walls and flaps. When each of the plurality of fold lines 106 is folded, the carton 102 forms a box-shaped carton.

[0028] The carton 102 includes a bottom box 110 having a bottom wall 112, a first sidewall 114, a second sidewall 116; a back wall 118, and a first front wall 120. The back wall includes flaps 122a and 122b, and the first front wall 120 includes flaps 124a and 124b. When each of the first sidewall 114, the second sidewall 116, the back wall 118, and the first front wall 120 are folded up, the flaps 122a and 124a are glued to the first sidewall 114 while the flaps 122b and 124b are glued to the second sidewall 116. Alternatively, the flaps 122a, 122b, 124a, and 124b can be secured to the first and second sidewalls 114 and 116 via interlocking slits, other adhesives, or other known methods of assembling boxes and cartons. As a result, the first sidewall 114, the second sidewall 116, the back wall 118, and the first front wall 120 are all secured together to form the bottom box 110.

[0029] Additionally, the first front wall 120 includes a first tab 126a and a second tab 126b. Additionally, the first front wall 120 includes a material reduction section 128. The material reduction section 128 increases the pliability of the first front wall 120, relative the first front wall 120 if the first front wall 120 did not include the material reduction section 128.

[0030] Furthermore, the carton 102 includes a lid 140, hingedly connected to the back wall 118. The lid 140 in this version is an overlid and includes a top wall 142, a third sidewall 144, a fourth sidewall 146, and a second front wall 148. The third sidewall 144 includes a flap 152a and the fourth sidewall includes a flap 152b. When the third sidewall 144, the fourth sidewall 146, and the second front wall 148 are folded, the flaps 152a and 152b are glued to the second front wall 148. The flaps 152a and 152b can be secured to the first and second sidewalls 114 and 116 via interlocking slits, other adhesives, or other known methods of assembling boxes and cartons. As a result, when assembled the third sidewall 144, the fourth sidewall 146, and the second front

wall 148 for the lid 140 that covers the bottom box 110, including the first side wall 114, the second sidewall 116, and the first front wall 120.

[0031] The second front wall 148 includes a perforated line 160 about a release tab 162 adjacent a bottom edge 164 of the second front wall 148. The release tab 162 is enclosed by a perforated line 160 and the bottom edge 164. As shown in FIG. 1, the release tab 162 includes a first kiss cut 166 and the bottom wall 112 includes a second kiss cut 168. The perforated line 160 allows the release tab 162 to be detached from the second front wall 148 when sufficient force is applied to the release tab 162. As shown in FIG. 1, the release tab 162 is partially rectangular with a rounded side, however, the release tab 162 could be any of a variety of shapes including semi-circular, triangular, quadrilateral, pentagonal, etc.

[0032] In some examples, the second front wall 148 can include latching feature 154a and 154b when the flaps 152a and 152b are glued to the second front wall 148. When the carton 102 is assembled, the tab seat 154a receives the tab 126a and the tab seat 154b receives the tab 126b. As a result, the tab 126a resting on the tab seat 154a provides resistance to opening the carton 102. Additionally, when closing the carton 102, the tab 126a moving into position with the tab seat 154a generates an audible click, indicating that the carton is closed. While the carton 102 of FIG. 1 is shown with two tabs, tabs 126a and 126b, the carton 102 can include with more or fewer than two tabs.

[0033] FIG. 2 is a perspective view of the medicament storage carton 202 including a storage cavity 210 and the easy open feature 104 of FIG. 1. As shown in FIG. 2, the carton 202 is folded and assembled based on the die cut 100, as shown in FIG. 1, such that the storage cavity 210 can receive and store a drug delivery device 212 containing medicament. Accordingly, the bottom box 110 is disposed within the lid 140. As a result, the first sidewall 114 is adjacent the third sidewall 144 and the second sidewall 116 is adjacent the fourth sidewall 146. Additionally, as shown in FIG. 2, the second front wall 148 is an outer front wall with the bottom edge 164 adjacent the bottom wall 112.

[0034] In accordance with the present disclosure, the carton 202 is designed to store at least one drug delivery device 212 in a storage cavity 210 disposed in the bottom box 110. While the carton 202 is shown with one drug delivery device 212, in other examples, the carton 202 can store one, two, or more drug delivery devices. The drug delivery device 212 can be a pre-filled hypodermic syringe or a pre-filled autoinjector product for use with a medicament autoinjector.

[0035] The bottom box 110 additionally includes tabs 126a and 126b disposed on the first front wall 120. The tab 126a engages the flap 152a hingedly connected to the third sidewall 144 and the tab 126b engages the flap 152b hingedly connected to the fourth sidewall 146. As a result, the carton 202 can be secured in a closed position when the tabs 126a and 126b are engaged with a latching feature 154a and 154b, such as flaps 152a and 152b, respectively.

[0036] FIG. 3 is a plan view of the easy open feature 104 including the release tab 162 constituting the easy open feature 104. The release tab 162 is partially circumscribed by a perforated line 160. The perforated line 160 consists of a series of cuts 302. The length of the cuts 302 shown in FIG. 3 could be longer or shorter. Additionally, while 5 cuts 302 are shown, the perforated line may consist of more or fewer cuts 302. Additionally, the release tab 162 includes the first kiss cut 166. The first kiss cut 166 is a partial cut through the release tab 162. The partial cut improves the bonding between the release tab 162 and a tamper evident seal by increasing the surface area the tamper evident seal can adhere to. While the first kiss cut 166 is in the shape of a trigonometric wave, the first kiss cut 166 could be any of a variety of shapes or patterns.

[0037] FIG. 4 is a perspective view of the medicament storage carton 202 of FIG. 2, additionally including a closure label 402 to seal the medicament storage carton 202. The closure label 402 acts as a tamper evident seal. Any attempt to pull the closure label 402 off the carton 202, will result in visible damage to the carton 202 and/or the closure label 402. Accordingly, a person can avoid using medicament stored in a carton that may have been tampered with by noticing evidence of such tampering.

[0038] As shown in FIG. 4, the release tab 162 is secured to the bottom wall 118 via a closure label 402. Because the release tab 162 is connected to the second front wall 148, the lid 140 is secured in a closed state. Alternatively, the release tab 162 is secured to the first front wall 120 of the bottom box 110 via an adhesive disposed between the release tab 162 and the first front wall 120. However, in both examples, the lid 140 is secured in a closed state through a closure label 402 or adhesive only applied to the lid 140 within the release tab 162. Additionally, the adhesive or closure label 402 can be applied on a substantial portion of the release tab 162, including along or adjacent the perforated line 160 of the release tab 162. For example, the adhesive or closure label 402 may have a similar shape and size to the release tab 162. In such an example, the adhesive or closure label 402 concentrates the force exerted on the release tab 162 on the perforated line 160. Accordingly, the adhesive or closure label 402 covering substantially all of the release tab makes detaching the release tab 162 from the second front wall 148 easier.

[0039] Further, the closure label 402 is disposed over the first kiss cut 166 and the second kiss cut 168. As a result, the closure label 402 has a strong adhesive bond with both the release tab 162 and the bottom wall 112. Accordingly, tampering with the closure label 402 will result in visibly evident tampering and/or damage. Thus, the closure label 402 provides security in the integrity of medicament stored in the carton 202.

[0040] Although not shown in FIG. 4, in some examples the carton 202 includes a first exterior finish with a first texture and the release tab 162 includes a second exterior finish with a second texture. The first texture is different from the second texture, such that a user can feel the approximate location of the release tab 162 and the closure label 402. As a result, the difference between the first and second textures improves the accessibility and usability of the storage carton 202. In some examples, the first texture may be a wax or varnish that protects information printed on the exterior surface of the carton 202. In contrast, the second texture may be less treated to improve the adhesion between the closure label 402 and the carton 202 to improve the security of the tamper evident seal.

[0041] FIG. 5 is a perspective view of pressing the easy open feature 104 of the medicament storage carton of FIG. 2. As shown in FIG. 5, a user can hold the carton 202 in one hand while pressing the easy open feature 104. However, the carton 202 may be too large to be opened with a single hand, and one hand may need to be used to hold the carton 202 while the other hand presses the easy open feature 104.

[0042] According to the present disclosure, the release tab 162 is the opening feature 104 of the carton that detaches the release tab 162 from the second front wall 148. The release tab 162 acts as push tab that detaches the release tab 162 from the second front wall 148. Because the closure label 402 is only adhered to the bottom wall 112 and the release tab 162, the second front wall 148 is no longer retained in a closed position by the closure label 402.

[0043] As discussed with respect to FIG. 1, the first front wall 120 includes a cut-out section 128. The cut-out increases the pliability of the first front wall 120 relative the second front wall 148. The increased pliability of the first front wall 120 increases the distance the release tab 162 can travel. Because the first front wall 120 has increased pliability, the release tab 162 can travel further and is easier to detach from the second front wall 148. Further, while the first front wall 120 has a cut-out section 128, the material of the first front wall 120 should be taller than the release tab 162, such that the interior environment of the carton 202 remains separated from the exterior environment of the carton 202 when the carton 202 is closed.

[0044] FIG. 6 is a perspective view of the medicament storage carton 202 of FIG. 2, with the easy open feature 104 detached from the second front wall 148. With the release tab 162 detached from the second front wall 148, the lid 140 can be both opened and closed. In the open position, the lid 140 does not cover the bottom box 110. In contrast, when in the closed position, the lid 140 covers the bottom box 110. Additionally, in the closed position, tabs 126a and 126b engage latching features 154a and 154b, such as flaps 152a and 152b, to removably secure the lid 140 in the closed position.

[0045] FIG. 7 is a plan view of a die cut 700 of a medicament storage carton 702 including an easy open push-then-pull feature 704. The carton 702 is made from a unitary material. For example, the carton 702 may be made of a paperboard, cardboard, matboard, or similar materials. Additionally, the carton 702 includes a plurality of fold lines 706, dividing the carton 702 into a plurality of walls and flaps. When each of the plurality of fold lines 706 is folded, the carton 702 forms a box-shaped carton.

[0046] The carton 702 includes a bottom box 710 having a bottom wall 712, a first sidewall 714, a second sidewall 716; a back wall 718, and a first front wall 720. The back wall includes flaps 722a and 722b, and the first front wall 720 includes flaps 724a and 724b. When each of the first sidewall 714, the second sidewall 716, the back wall 718, and the first front wall 720 are folded up, the flaps 722a and 724a are glued to the first sidewall 714 while the flaps 722b and 724b are glued to the second sidewall 716. Alternatively, the flaps 722a, 722b, 724a, and 724b can be secured to the first and second sidewalls 714 and 716 via interlocking slits, other adhesives, or other known methods of assembling boxes and cartons. As a result, the first sidewall 714, the second sidewall 716, the back wall 718, and the first front wall 720 are all secured together to form the bottom box 710.

[0047] Additionally, the first front wall 720 includes a first tab 726a and a second tab 726b. The first front wall 720 also includes a material reduction section 728. The material reduction section 728 increases the pliability of the first front wall 720, relative the first front wall 720 if the first front wall 720 did not include the material reduction section 728.

[0048] Furthermore, the carton 702 includes a lid 740, hingedly connected to the back wall 718. The lid 740 in this version is an overlid and includes a top wall 742, a third sidewall 744, a fourth sidewall 746, and a second front wall 748. The third sidewall 744 includes a flap 752a and the fourth sidewall includes a flap 752b. When the third sidewall 744, the fourth sidewall 746, and the second front wall 748 are folded, the flaps 752a and 752b are glued to the second front wall 748. The flaps 752a and 752b can be secured to the first and second sidewalls 714 and 716 via interlocking slits, other adhesives, or other known methods of assembling boxes and cartons. In some examples, the second front wall 748 can include latching feature 754a and 754b when the flaps 752a and 752b are glued to the second front wall 748. As a result, when assembled the third sidewall 744, the fourth sidewall 746, and the second front wall 748 for the lid 740 that covers the bottom box 710, including the first side wall 714, the second sidewall 716, and the first front wall 720.

[0049] The second front wall 748 includes a perforated line 760 about a release tab 762 adjacent a bottom edge 764 of the second front wall 748. The release tab 762 is enclosed by a perforated line 760 and the bottom edge 764. The release tab 762 includes a push tab 770 and a pull tab 772. The push tab 770 and the pull tab 772 are divided by a fold line 774. As a result, the push tab 770 is hingedly connected to the pull tab 772. As shown in FIG. 7, the release tab 762 also includes a kiss cut 780.

[0050] In some examples, the second front wall 748 can include latching features 754a and 754b when the flaps 752a and 752b are glued to the second front wall 748. When the carton 702 is assembled, the tab seat 754a receives the tab 726a and the tab seat 754b receives the tab 726b. As a result, the tab 726a resting on the tab seat 754a provides resistance to opening the carton 702. Additionally, when closing the carton 702, the tab 726a moving into position with the tab seat 754a generates an audible click, indicating that the carton is closed. While the carton 702 of FIG. 7 is shown with two tabs, tabs 726a and 726b, the carton 702 can be include with more or fewer than two tabs.

[0051] FIG. 8 is a perspective view of a medicament storage carton 802 including the easy open feature 704 of FIG. 7. As shown in FIG. 8, the carton 802 is a folded carton 702 of the die cut 700 as shown in FIG. 7. As shown in FIG. 8, the bottom box 710 is disposed within the lid 740. As a result, the first sidewall 714 is adjacent the third sidewall 744 and the second sidewall 716 is adjacent the fourth sidewall 746. Additionally, as shown in FIG. 8, the second front wall 748 is an outer front wall with the bottom edge 764 adjacent the bottom wall 712.

[0052] In accordance with the present disclosure, the carton 802 is designed to store at least one drug delivery device 812 in a storage cavity 810 disposed in the bottom box 710. While the carton 802 is shown with one drug delivery device 812, in other

examples, the carton 802 can store one, two, or more drug delivery devices. The drug delivery device 812 can be a pre-filled hypodermic syringe or a pre-filled autoinjector product for use with a medicament autoinjector.

[0053] The bottom box 710 additionally includes tabs 726a and 726b disposed on the first front wall 720. The tab 726a engages the flap 752a hingedly connected to the third sidewall 744 and the tab 726b engages the flap 752b hingedly connected to the fourth sidewall 746. As a result, the carton 802 can be secured in a closed position when the tabs 726a and 726b are engaged with 752a and 752b respectively.

[0054] FIG. 9 is a plan view of the easy open feature 704 of FIG. 7 including a release tab 762 constituting the easy open feature 704. The release tab 762 is partially circumscribed by a perforated line 760. The perforated line 760 consists of a series of cuts 902. The length of the cuts 902 shown in FIG. 9 could be longer or shorter. Additionally, while five cuts 902 are shown, the perforated line may consist of more or fewer cuts 302. Additionally, the release tab 762 includes the kiss cut 780. The kiss cut 780 is a partial cut through the release tab 762. The partial cut improves the bonding between the release tab 762 and a tamper evident seal by increasing the surface area the tamper evident seal can adhere to. While the kiss cut 766 is in the shape of a trigonometric wave, the first kiss cut 166 could be any of a variety of shapes or patterns.

[0055] FIG. 10 is a perspective view of the medicament storage carton 802 of FIG. 7 additionally including a closure label 1002 to seal the medicament storage carton 802. The closure label 1002 acts as a tamper evident seal. Any attempt to pull the closure label 1002 off the carton 802, will result in visible damage to the carton 802. Accordingly, a person can avoid using medicament stored in a carton that may have been tampered with.

[0056] As shown in FIG. 10, the release tab 762 is secured to the bottom wall 718 via a closure label 1002. Because the release tab 762 is connected to the second front wall 748, the lid 740 is secured in a closed state. Alternatively, the release tab 762 is secured to the first front wall 720 of the bottom box 710 via an adhesive disposed between the release tab 762 and the first front wall 720. However, in both examples, the lid 740 is secured in a closed state through a closure label 1002 or adhesive only applied to the lid 740 within the release tab 762. Additionally, the adhesive or closure label 1002 can be applied on a substantial portion of the release tab 762, including applied along or adjacent the perforated line 760 of the release tab 762. For example, a portion of the adhesive or closure label 1002 may have a similar shape and size to the release tab 762. In such an example, the adhesive or closure label 1002 concentrates the force exerted on the release tab 762 on the perforated line 760. Accordingly, the adhesive or closure label 1002 covering substantially all of the release tab 762 makes detaching the release tab 762 from the second front wall 748 easier.

[0057] The closure label 1002 is disposed over the kiss cut 780. As a result, the closure label 1002 has a strong adhesive bond with the release tab 762. Accordingly, tampering with the closure label 1002 will result in visibly evident tampering. Thus, the closure label 1002 provides security in the integrity of medicament stored in the carton 802.

[0058] Although not shown in FIG. 10, in some examples the carton 802 includes a first exterior finish with a first texture and the release tab 762 includes a second exterior finish with a second texture. The first texture is different from the second texture, such that a user can feel the approximate location of the release tab 762 and the closure label 1002. As a result, the difference between the first and second textures improves the accessibility and usability of the storage carton 802. In some examples, the first texture may be a wax or varnish that protects information printed on the exterior surface of the carton 802. In contrast, the second texture may be less treated to improve the adhesion between the closure label 1002 and the carton 802 to improve the security of the tamper evident seal.

[0059] FIG. 11 is a perspective view of operating the push-then-pull easy open feature of the medicament storage carton of FIG. 7. As shown in FIG. 11, a user can hold the carton 802 in one hand while pressing the easy open feature 704. However, the

carton 802 may be too large to be opened with a single hand, and one hand may need to be used to hold the carton 802 while the other hand presses the easy open feature 704.

[0060] According to the present disclosure, the release tab 762 is the opening feature 704 of the carton that detaches the release tab 762 from the second front wall 748. The release tab 762 includes the push tab 770 that detaches a first portion of the release tab 762 from the second front wall 748. Then, a user can fold the release tab 762 about the fold line 774 and pull the pull tab 772 to fully detach the release tab 762 from the second wall 748. Because the closure label 1002 is only adhered to the bottom wall 712 and the release tab 762, the second front wall 748 is no longer retained in a closed position by the closure label 1002.

[0061] As discussed with respect to FIG. 7, the first front wall 720 includes a cut-out section 728, wherein the first front wall 720 includes a cut-out to increase pliability of the first front wall relative the second front wall. The increased pliability of the first front wall 720 increases the distance the release tab 762 can travel. Because the first front wall 720 has increased pliability, the release tab 762 can travel further and is easier to detach from the second front wall 748. Further, while the first front wall 720 has a cut-out section 728, the material of the first front wall 720 should be taller than the release tab 762, such that the interior environment of the carton 802 remains separated from the exterior environment of the carton 802 when the carton 802 is closed.

[0062] FIG. 12 is a perspective view of the medicament storage carton 802 of FIG. 8, with the easy open feature 704 detached from the second front wall 748. With the release tab 762 detached from the second front wall 762, the lid 740 can be both opened and closed. In the open position, the lid 740 does not cover the bottom box 710. In contrast, when in the closed position, the lid 740 covers the bottom box 710. Additionally, in the closed position, tabs 726a and 726b engage latching features 754a and 754b, such as flaps 752a and 752b, to removably secure the lid 740 in the closed position.

[0063] FIG. 13 is a plan view of a die cut 1300 of an alternative medicament storage carton 1302 including an easy open feature 1304. The carton 1302 can be made from a unitary material, such as paperboard, cardboard, matboard, or similar materials. Additionally, the carton can be made from several pieces glued or otherwise secured together. As illustrated, the die cut 1300 includes a plurality of fold lines 1306, dividing the carton 1302 into a plurality of walls and flaps. When each of the plurality of fold lines 1306 is folded, the carton 1302 forms a box-shaped carton.

[0064] The carton 1302 includes a bottom wall 1312, a first sidewall 1314, a second sidewall 1316, a back wall 1318, and a front wall 1320. The first sidewall 1314 includes flaps 1322a and 1322b, and the second sidewall 1316 includes flaps 1324a and 1324b. When each of the first sidewall 1314, the second sidewall 1316, the back wall 1318, and the front wall 1320 are folded, the flaps 1322b and 1324b are glued to the bottom wall 1312. Alternatively, the flaps 1322b and 1324b can be secured to the bottom wall 1312 via interlocking slits, other adhesives, or other known methods of assembling boxes and cartons. As a result, the first sidewall 1314, the second sidewall 1316, the back wall 1318, and the first front wall 1320 are all secured together to form a bottom box 1330 (shown in FIG. 14) of the carton 1302.

[0065] Furthermore, the carton 1302 includes a lid 1340, hingedly connected to the back wall 1318. The lid 1340 as shown in FIG. 13 is an underlid and includes a top wall 1342. The top wall 1342 includes a front lip 1346 hingedly connected to the top wall 1342. When the lid 1340 of the carton 1302 is disposed in a closed position (see, FIG. 14), the top wall 1342 covers the flaps 1322a and 1322b, which are folded inward (see also, FIG. 14). Additionally, in this configuration, the front lip 1346 of the lid 1340 is folded and disposed behind and adjacent the front wall 1320. The front wall 1320 also defines a release tab 1350 disposed at its top edge. The release tab 1350 in this version may be defined by a perforated line 1352 in the front wall 1320. The perforated line 1352 allows the release tab 1350 to be detached from the remainder of the front wall 1320 under the application of sufficient force. As shown in FIG. 13, the release tab 1350 is generally U-shaped (similar to the release tabs depicted in previous embodiments) with generally straight sides and a curved bottom, similar to release tab 162 of FIG. 1. In some examples, the

medicament storage carton may further include one or more kiss cuts 1354, similar to kiss cuts 166, 168, to improve the adhesion of the adhesive used to close the carton 1302.

[0066] FIG. 14 is a perspective view of the alternative medicament storage carton 1302 of FIG. 13 in its fully assembled/constructed configuration with the lid 1340 occupying a closed position. As shown, the medicament storage carton 1302 includes the bottom box 1330 and the lid 1340, shown as an underlid. This means the carton 1302, shown in the closed position in FIG. 14, includes the front lip 1346 disposed inside of the bottom box 1330 and behind the front wall 1320. The carton 1302 further includes the release tab 1350 defined by the front wall 1320. Finally, an adhesive, which in this version is an adhesive label 1410 is applied over the corner where the lid 1340 meets the front wall 1320, with portions of the label 1410 adhered to the release tab 1350 and top wall 1342 of the lid 1340. As a result, when sufficient force is applied to the release tab 1350, the release tab 1350 separates from the front wall 1320, which then allows the lid 1340 to move hingedly upward carrying the release tab 1350 and label 1410 with it to an open position. Accordingly, in the closed position, the adhesive label 1410 and release tab 1350 keep the lid 1340 secured in the closed position, but after the release tab 1350 is separated from the front wall 1320, the lid 1340 is free to move into its open position.

[0067] Additionally, in some examples, the adhesive or adhesive label 1410 can be applied on a substantial portion of the release tab 1410, including applied along or adjacent the perforated line 1352 of the release tab 1350. For example, a portion of the adhesive or adhesive label 1410 may have a similar shape and size to the release tab 1410. In such an example, the adhesive or adhesive label 1410 concentrates the force exerted on the release tab 1350 on the perforated line 1352. Accordingly, the adhesive or adhesive label 1410 covering substantially all of the release tab 1350 makes detaching the release tab 1350 from the front wall easier 1320.

[0068] The above description describes various devices, assemblies, components, subsystems and methods for use related to a drug delivery device. The devices, assemblies, components, subsystems, methods or drug delivery devices can further comprise or be used with a drug including but not limited to those drugs identified below as well as their generic and biosimilar counterparts. The term drug, as used herein, can be used interchangeably with other similar terms and can be used to refer to any type of medicament or therapeutic material including traditional and non-traditional pharmaceuticals, nutraceuticals, supplements, biologics, biologically active agents and compositions, large molecules, biosimilars, bioequivalents, therapeutic antibodies, polypeptides, proteins, small molecules and generics. Non-therapeutic injectable materials are also encompassed. The drug may be in liquid form, a lyophilized form, or in a reconstituted from lyophilized form. The following example list of drugs should not be considered as all-inclusive or limiting.

[0069] The drug will be contained in a reservoir. In some instances, the reservoir is a primary container that is either filled or pre-filled for treatment with the drug. The primary container can be a vial, a cartridge or a pre-filled syringe.

[0070] In some embodiments, the reservoir of the drug delivery device may be filled with or the device can be used with colony stimulating factors, such as granulocyte colony-stimulating factor (G-CSF). Such G-CSF agents include but are not limited to Neulasta® (pegfilgrastim, pegylated filgrastim, pegylated G-CSF, pegylated hu-Met-G-CSF) and Neupogen® (filgrastim, G-CSF, hu-MetG-CSF), UDENYCA® (pegfilgrastim-cbqv), Ziextenzo® (LA-EP2006; pegfilgrastim-bmez), or FULPHILA (pegfilgrastim-bmez).

[0071] In other embodiments, the drug delivery device may contain or be used with an erythropoiesis stimulating agent (ESA), which may be in liquid or lyophilized form. An ESA is any molecule that stimulates erythropoiesis. In some embodiments, an ESA is an erythropoiesis stimulating protein. As used herein, "erythropoiesis stimulating protein" means any protein that directly or indirectly causes activation of the erythropoietin receptor, for example, by binding to and causing dimerization of the receptor. Erythropoiesis stimulating proteins include erythropoietin and variants, analogs, or derivatives thereof that bind to and activate erythropoietin receptor; antibodies that bind to erythropoietin receptor and activate the receptor; or peptides that bind to and

activate erythropoietin receptor. Erythropoiesis stimulating proteins include, but are not limited to, Epogen® (epoetin alfa), Aranesp® (darbepoetin alfa), Dynepo® (epoetin delta), Mircera® (methoxy polyethylene glycol-epoetin beta), Hematide®, MRK-2578, INS-22, Retacrit® (epoetin zeta), Neorecormon® (epoetin beta), Silapo® (epoetin zeta), Binocrit® (epoetin alfa), epoetin alfa Hexal, Abseamed® (epoetin alfa), Ratioepo® (epoetin theta), Eporatio® (epoetin theta), Biopoin® (epoetin theta), epoetin alfa, epoetin beta, epoetin iota, epoetin omega, epoetin delta, epoetin zeta, epoetin theta, and epoetin delta, pegylated erythropoietin, carbamylated erythropoietin, as well as the molecules or variants or analogs thereof.

[0072] Among particular illustrative proteins are the specific proteins set forth below, including fusions, fragments, analogs, variants or derivatives thereof: OPGL specific antibodies, peptibodies, related proteins, and the like (also referred to as RANKL specific antibodies, peptibodies and the like), including fully humanized and human OPGL specific antibodies, particularly fully humanized monoclonal antibodies; Myostatin binding proteins, peptibodies, related proteins, and the like, including myostatin specific peptibodies; IL-4 receptor specific antibodies, peptibodies, related proteins, and the like, particularly those that inhibit activities mediated by binding of IL-4 and/or IL-13 to the receptor; Interleukin 1-receptor 1 ("IL1-R1") specific antibodies, peptibodies, related proteins, and the like; Ang2 specific antibodies, peptibodies, related proteins, and the like; NGF specific antibodies, peptibodies, related proteins, and the like; CD22 specific antibodies, peptibodies, related proteins, and the like, particularly human CD22 specific antibodies, such as but not limited to humanized and fully human antibodies, including but not limited to humanized and fully human monoclonal antibodies, particularly including but not limited to human CD22 specific IgG antibodies, such as, a dimer of a human-mouse monoclonal hLL2 gamma-chain disulfide linked to a human-mouse monoclonal hLL2 kappa-chain, for example, the human CD22 specific fully humanized antibody in Epratuzumab, CAS registry number 501423-23-0; IGF-1 receptor specific antibodies, peptibodies, and related proteins, and the like including but not limited to anti-IGF-1R antibodies; B-7 related protein 1 specific antibodies, peptibodies, related proteins and the like ("B7RP-1" and also referring to B7H2, ICOSL, B7h, and CD275), including but not limited to B7RP-specific fully human monoclonal IgG2 antibodies, including but not limited to fully human IgG2 monoclonal antibody that binds an epitope in the first immunoglobulin-like domain of B7RP-1, including but not limited to those that inhibit the interaction of B7RP-1 with its natural receptor, ICOS, on activated T cells; IL-15 specific antibodies, peptibodies, related proteins, and the like, such as, in particular, humanized monoclonal antibodies, including but not limited to HuMax IL-15 antibodies and related proteins, such as, for instance, 145c7; IFN gamma specific antibodies, peptibodies, related proteins and the like, including but not limited to human IFN gamma specific antibodies, and including but not limited to fully human anti-IFN gamma antibodies; TALL-1 specific antibodies, peptibodies, related proteins, and the like, and other TALL specific binding proteins; Parathyroid hormone ("PTH") specific antibodies, peptibodies, related proteins, and the like; Thrombopoietin receptor ("TPO-R") specific antibodies, peptibodies, related proteins, and the like; Hepatocyte growth factor ("HGF") specific antibodies, peptibodies, related proteins, and the like, including those that target the HGF/SF:cMet axis (HGF/SF:c-Met), such as fully human monoclonal antibodies that neutralize hepatocyte growth factor/scatter (HGF/SF); TRAIL-R2 specific antibodies, peptibodies, related proteins and the like; Activin A specific antibodies, peptibodies, proteins, and the like; TGF-beta specific antibodies, peptibodies, related proteins, and the like; Amyloid-beta protein specific antibodies, peptibodies, related proteins, and the like; c-Kit specific antibodies, peptibodies, related proteins, and the like, including but not limited to proteins that bind c-Kit and/or other stem cell factor receptors; OX40L specific antibodies, peptibodies, related proteins, and the like, including but not limited to proteins that bind OX40L and/or other ligands of the OX40 receptor; Activase® (alteplase, tPA); Aranesp® (darbepoetin alfa) Erythropoietin [30-asparagine, 32-threonine, 87-valine, 88-asparagine, 90-threonine], Darbepoetin alfa, novel erythropoiesis stimulating protein (NESP); Epogen® (epoetin alfa, or erythropoietin); GLP-1, Avonex® (interferon beta-1a); Bexxar® (tositumomab, anti-CD22 monoclonal antibody); Betaseron® (interferon-beta); Campath® (alemtuzumab, anti-CD52 monoclonal antibody); Dynepo® (epoetin delta); Velcade® (bortezomib); MLN0002 (anti-α4β7 mAb); MLN1202 (anti-CCR2 chemokine receptor mAb); Enbrel® (etanercept, TNF-receptor /Fc fusion protein, TNF blocker); Eprex® (epoetin alfa); Erbitux® (cetuximab, anti-EGFR / HER1 / c-ErbB-1); Genotropin® (somatropin, Human Growth

Hormone); Herceptin® (trastuzumab, anti-HER2/neu (erbB2) receptor mAb); Kanjinti™ (trastuzumab-anns) anti-HER2 monoclonal antibody, biosimilar to Herceptin®, or another product containing trastuzumab for the treatment of breast or gastric cancers; Humatrope® (somatropin, Human Growth Hormone); Humira® (adalimumab); Vectibix® (panitumumab), Xgeva® (denosumab), Prolia® (denosumab), Immunoglobulin G2 Human Monoclonal Antibody to RANK Ligand, Enbrel® (etanercept, TNF-receptor /Fc fusion protein, TNF blocker), Nplate® (romiplostim), rilotumumab, ganitumab, conatumumab, brodalumab, insulin in solution; Infergen® (interferon alfacon-1); Natrecor® (nesiritide; recombinant human B-type natriuretic peptide (hBNP)); Kineret® (anakinra); Leukine® (sargamostim, rhuGM-CSF); LymphoCide® (epratuzumab, anti-CD22 mAb); Benlysta™ (lymphostatin B, belimumab, anti-BlyS mAb); Metalyse® (tenecteplase, t-PA analog); Mircera® (methoxy polyethylene glycol-epoetin beta); Mylotarg® (gemtuzumab ozogamicin); Raptiva® (efalizumab); Cimzia® (certolizumab pegol, CDP 870); Soliris™ (eculizumab); pexelizumab (anti-C5 complement); Numax® (MEDI-524); Lucentis® (ranibizumab); Panorex® (17-1A, edrecolomab); Trabcio® (lerdelimumab); TheraCim hR3 (nimotuzumab); Omnitarg (pertuzumab, 2C4); Osidem® (IDM-1); OvaRex® (B43.13); Nuvion® (visilizumab); cantuzumab mertansine (huC242-DM1); NeoRecormon® (epoetin beta); Neumega® (oprelvekin, human interleukin-11); Orthoclone OKT3® (muromonab-CD3, anti-CD3 monoclonal antibody); Procrit® (epoetin alfa); Remicade® (infliximab, anti-TNF α monoclonal antibody); Reopro® (abciximab, anti-GP IIb/IIIa receptor monoclonal antibody); Actemra® (anti-IL6 Receptor mAb); Avastin® (bevacizumab), HuMax-CD4 (zanolimumab); Mvasi™ (bevacizumab-awwb); Rituxan® (rituximab, anti-CD20 mAb); Tarceva® (erlotinib); Roferon-A® (interferon alfa-2a); Simulect® (basiliximab); Prexige® (lumiracoxib); Synagis® (palivizumab); 145c7-CHO (anti-IL15 antibody, see U.S. Patent No. 7,153,507); Tysabri® (natalizumab, anti- α 4 integrin mAb); Valortim® (MDX-1303, anti-B. anthracis protective antigen mAb); ABthrax™; Xolair® (omalizumab); ETI211 (anti-MRSA mAb); IL-1 trap (the Fc portion of human IgG1 and the extracellular domains of both IL-1 receptor components (the Type I receptor and receptor accessory protein)); VEGF trap (Ig domains of VEGFR1 fused to IgG1 Fc); Zenapax® (daclizumab); Zenapax® (daclizumab, anti-IL-2R α mAb); Zevalin® (ibritumomab tiuxetan); Zetia® (ezetimibe); Orenicia® (atacept, TACI-Ig); anti-CD80 monoclonal antibody (galiximab); anti-CD23 mAb (lumiliximab); BR2-Fc (huBR3 / huFc fusion protein, soluble BAFF antagonist); CNTO 148 (golimumab, anti-TNF α mAb); HGS-ETR1 (mapatumumab; human anti-TRAIL Receptor-1 mAb); HuMax-CD20 (ocrelizumab, anti-CD20 human mAb); HuMax-EGFR (zalutumumab); M200 (volociximab, anti- α 5 β 1 integrin mAb); MDX-010 (ipilimumab, anti-CTLA-4 mAb and VEGFR-1 (IMC-18F1); anti-BR3 mAb; anti-C. difficile Toxin A and Toxin B C mAbs MDX-066 (CDA-1) and MDX-1388); anti-CD22 dsFv-PE38 conjugates (CAT-3888 and CAT-8015); anti-CD25 mAb (HuMax-TAC); anti-CD3 mAb (NI-0401); adecatumumab; anti-CD30 mAb (MDX-060); MDX-1333 (anti-IFNAR); anti-CD38 mAb (HuMax CD38); anti-CD40L mAb; anti-Cripto mAb; anti-CTGF Idiopathic Pulmonary Fibrosis Phase I Fibrogen (FG-3019); anti-CTLA4 mAb; anti-eotaxin1 mAb (CAT-213); anti-FGF8 mAb; anti-ganglioside GD2 mAb; anti-ganglioside GM2 mAb; anti-GDF-8 human mAb (MYO-029); anti-GM-CSF Receptor mAb (CAM-3001); anti-HepC mAb (HuMax HepC); anti-IFN α mAb (MEDI-545, MDX-198); anti-IGF1R mAb; anti-IGF-1R mAb (HuMax-Inflam); anti-IL12 mAb (ABT-874); anti-IL12/IL23 mAb (CNTO 1275); anti-IL13 mAb (CAT-354); anti-IL2Ra mAb (HuMax-TAC); anti-IL5 Receptor mAb; anti-integrin receptors mAb (MDX-018, CNTO 95); anti-IP10 Ulcerative Colitis mAb (MDX-1100); BMS-66513; anti-Mannose Receptor/hCG β mAb (MDX-1307); anti-mesothelin dsFv-PE38 conjugate (CAT-5001); anti-PD1mAb (MDX-1106 (ONO-4538)); anti-PDGFR α antibody (IMC-3G3); anti-TGF β mAb (GC-1008); anti-TRAIL Receptor-2 human mAb (HGS-ETR2); anti-TWEAK mAb; anti-VEGFR/Flt-1 mAb; and anti-ZP3 mAb (HuMax-ZP3).

[0073] In some embodiments, the drug delivery device may contain or be used with a sclerostin antibody, such as but not limited to romosozumab, blosozumab, BPS 804 (Novartis), Evenity™ (romosozumab-aqqg), another product containing romosozumab for treatment of postmenopausal osteoporosis and/or fracture healing and in other embodiments, a monoclonal antibody (IgG) that binds human Proprotein Convertase Subtilisin/Kexin Type 9 (PCSK9). Such PCSK9 specific antibodies include, but are not limited to, Repatha® (evolocumab) and Praluent® (alirocumab). In other embodiments, the drug delivery device may contain or be used with rilotumumab, bixalomer, trebananib, ganitumab, conatumumab, motesanib diphosphate,

brodalumab, vidupiprant or panitumumab. In some embodiments, the reservoir of the drug delivery device may be filled with or the device can be used with IMLYGIC® (talimogene laherparepvec) or another oncolytic HSV for the treatment of melanoma or other cancers including but are not limited to OncoVEXGALV/CD; OrienX010; G207, 1716; NV1020; NV12023; NV1034; and NV1042. In some embodiments, the drug delivery device may contain or be used with endogenous tissue inhibitors of metalloproteinases (TIMPs) such as but not limited to TIMP-3. In some embodiments, the drug delivery device may contain or be used with Aimovig® (erenumab-aooe), anti-human CGRP-R (calcitonin gene-related peptide type 1 receptor) or another product containing erenumab for the treatment of migraine headaches. Antagonistic antibodies for human calcitonin gene-related peptide (CGRP) receptor such as but not limited to erenumab and bispecific antibody molecules that target the CGRP receptor and other headache targets may also be delivered with a drug delivery device of the present disclosure. Additionally, bispecific T cell engager (BiTE®) molecules such as but not limited to BLINCYTO® (blinatumomab) can be used in or with the drug delivery device of the present disclosure. In some embodiments, the drug delivery device may contain or be used with an APJ large molecule agonist such as but not limited to apelin or analogues thereof. In some embodiments, a therapeutically effective amount of an anti-thymic stromal lymphopoietin (TSLP) or TSLP receptor antibody is used in or with the drug delivery device of the present disclosure. In some embodiments, the drug delivery device may contain or be used with Avsola™ (infliximab-axxq), anti-TNF α monoclonal antibody, biosimilar to Remicade® (infliximab) (Janssen Biotech, Inc.) or another product containing infliximab for the treatment of autoimmune diseases. In some embodiments, the drug delivery device may contain or be used with Kyprolis® (carfilzomib), (2S)-N-((S)-1-((S)-4-methyl-1-((R)-2-methyloxiran-2-yl)-1-oxopentan-2-ylcarbamoyl)-2-phenylethyl)-2-((S)-2-(2-morpholinoacetamido)-4-phenylbutanamido)-4-methylpentanamide, or another product containing carfilzomib for the treatment of multiple myeloma. In some embodiments, the drug delivery device may contain or be used with Otezla® (apremilast), N-[2-[(1S)-1-(3-ethoxy-4-methoxyphenyl)-2-(methylsulfonyl)ethyl]-2,3-dihydro-1H-indol-4-yl]acetamide, or another product containing apremilast for the treatment of various inflammatory diseases. In some embodiments, the drug delivery device may contain or be used with Parsabiv™ (etelcalcetide HCl, KAI-4169) or another product containing etelcalcetide HCl for the treatment of secondary hyperparathyroidism (shPT) such as in patients with chronic kidney disease (KD) on hemodialysis. In some embodiments, the drug delivery device may contain or be used with ABP 798 (rituximab), a biosimilar candidate to Rituxan®/MabThera™, or another product containing an anti-CD20 monoclonal antibody. In some embodiments, the drug delivery device may contain or be used with a VEGF antagonist such as a non-antibody VEGF antagonist and/or a VEGF-Trap such as aflibercept (Ig domain 2 from VEGFR1 and Ig domain 3 from VEGFR2, fused to Fc domain of IgG1). In some embodiments, the drug delivery device may contain or be used with ABP 959 (eculizumab), a biosimilar candidate to Soliris®, or another product containing a monoclonal antibody that specifically binds to the complement protein C5. In some embodiments, the drug delivery device may contain or be used with Rozibafusp alfa (formerly AMG 570) is a novel bispecific antibody-peptide conjugate that simultaneously blocks ICOSL and BAFF activity. In some embodiments, the drug delivery device may contain or be used with Omecamtiv mecarbil, a small molecule selective cardiac myosin activator, or myotrope, which directly targets the contractile mechanisms of the heart, or another product containing a small molecule selective cardiac myosin activator. In some embodiments, the drug delivery device may contain or be used with Sotorasib (formerly known as AMG 510), a KRAS^{G12C} small molecule inhibitor, or another product containing a KRAS^{G12C} small molecule inhibitor. In some embodiments, the drug delivery device may contain or be used with Tezepelumab, a human monoclonal antibody that inhibits the action of thymic stromal lymphopoietin (TSLP), or another product containing a human monoclonal antibody that inhibits the action of TSLP. In some embodiments, the drug delivery device may contain or be used with AMG 714, a human monoclonal antibody that binds to Interleukin-15 (IL-15) or another product containing a human monoclonal antibody that binds to Interleukin-15 (IL-15). In some embodiments, the drug delivery device may contain or be used with AMG 890, a small interfering RNA (siRNA) that lowers lipoprotein(a), also known as Lp(a), or another product containing a small interfering RNA (siRNA) that lowers lipoprotein(a). In some embodiments, the drug delivery device may contain or be used with ABP 654 (human IgG1 kappa

antibody), a biosimilar candidate to Stelara®, or another product that contains human IgG1 kappa antibody and/or binds to the p40 subunit of human cytokines interleukin (IL)-12 and IL-23. In some embodiments, the drug delivery device may contain or be used with Amjevita™ or Amgevita™ (formerly ABP 501) (mab anti-TNF human IgG1), a biosimilar candidate to Humira®, or another product that contains human mab anti-TNF human IgG1. In some embodiments, the drug delivery device may contain or be used with AMG 160, or another product that contains a half-life extended (HLE) anti-prostate-specific membrane antigen (PSMA) x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 119, or another product containing a delta-like ligand 3 (DLL3) CAR T (chimeric antigen receptor T cell) cellular therapy. In some embodiments, the drug delivery device may contain or be used with AMG 119, or another product containing a delta-like ligand 3 (DLL3) CAR T (chimeric antigen receptor T cell) cellular therapy. In some embodiments, the drug delivery device may contain or be used with AMG 133, or another product containing a gastric inhibitory polypeptide receptor (GIPR) antagonist and GLP-1R agonist. In some embodiments, the drug delivery device may contain or be used with AMG 171 or another product containing a Growth Differential Factor 15 (GDF15) analog. In some embodiments, the drug delivery device may contain or be used with AMG 176 or another product containing a small molecule inhibitor of myeloid cell leukemia 1 (MCL-1). In some embodiments, the drug delivery device may contain or be used with AMG 199 or another product containing a half-life extended (HLE) bispecific T cell engager construct (BiTE®). In some embodiments, the drug delivery device may contain or be used with AMG 256 or another product containing an anti-PD-1 x IL21 mutein and/or an IL-21 receptor agonist designed to selectively turn on the Interleukin 21 (IL-21) pathway in programmed cell death-1 (PD-1) positive cells. In some embodiments, the drug delivery device may contain or be used with AMG 330 or another product containing an anti-CD33 x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 404 or another product containing a human anti-programmed cell death-1(PD-1) monoclonal antibody being investigated as a treatment for patients with solid tumors. In some embodiments, the drug delivery device may contain or be used with AMG 427 or another product containing a half-life extended (HLE) anti-fms-like tyrosine kinase 3 (FLT3) x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 430 or another product containing an anti-Jagged-1 monoclonal antibody. In some embodiments, the drug delivery device may contain or be used with AMG 506 or another product containing a multi-specific FAP x 4-1BB-targeting DARPIn® biologic under investigation as a treatment for solid tumors. In some embodiments, the drug delivery device may contain or be used with AMG 509 or another product containing a bivalent T-cell engager and is designed using XmAb® 2+1 technology. In some embodiments, the drug delivery device may contain or be used with AMG 562 or another product containing a half-life extended (HLE) CD19 x CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with Efavaleukin alfa (formerly AMG 592) or another product containing an IL-2 mutein Fc fusion protein. In some embodiments, the drug delivery device may contain or be used with AMG 596 or another product containing a CD3 x epidermal growth factor receptor vIII (EGFRvIII) BiTE® (bispecific T cell engager) molecule. In some embodiments, the drug delivery device may contain or be used with AMG 673 or another product containing a half-life extended (HLE) anti-CD33 x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 701 or another product containing a half-life extended (HLE) anti-B-cell maturation antigen (BCMA) x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 757 or another product containing a half-life extended (HLE) anti- delta-like ligand 3 (DLL3) x anti-CD3 BiTE® (bispecific T cell engager) construct. In some embodiments, the drug delivery device may contain or be used with AMG 910 or another product containing a half-life extended (HLE) epithelial cell tight junction protein claudin 18.2 x CD3 BiTE® (bispecific T cell engager) construct.

[0074] Although the drug delivery devices, assemblies, components, subsystems and methods have been described in terms of exemplary embodiments, they are not limited thereto. The detailed description is to be construed as exemplary only and does not describe every possible embodiment of the present disclosure. Numerous alternative embodiments could be implemented,

using either current technology or technology developed after the filing date of this patent that would still fall within the scope of the claims defining the invention(s) disclosed herein.

[0075] Those skilled in the art will recognize that a wide variety of modifications, alterations, and combinations can be made with respect to the above described embodiments without departing from the spirit and scope of the invention(s) disclosed herein, and that such modifications, alterations, and combinations are to be viewed as being within the ambit of the inventive concept(s).

What is claimed is:

1. A carton for medicament storage, the carton comprising:
a bottom box having a bottom wall, a first sidewall, a second sidewall, a back wall, and a front wall;
a lid coupled to the bottom box and movable between an open position and a closed position;
a release tab comprising a portion of one of the lid and bottom box and being defined by a perforated line in the one of the lid and the bottom box; and
an adhesive positioned on at least a part of the release tab and selectively coupling the lid and the bottom box,
wherein, when the lid is in the closed position, the release tab is secured to the one of the lid and the bottom box via the perforation and is secured to the other of the lid and the bottom box via the adhesive, and
wherein, when the lid is in the open position, the release tab is separated along the perforated line from the one of the lid and the bottom box and is secured to the other of the lid and the bottom box via the adhesive.
2. The carton of claim 1, wherein the lid comprises a top wall and a front lip.
3. The carton of claim 2, wherein the front lip is disposed within the bottom box when the lid is in the closed position.
4. The carton of claim 1, wherein the lid comprises a third sidewall adjacent the first sidewall, a fourth sidewall adjacent the second sidewall, and a second front wall adjacent to the first front wall.
5. The carton of any one of claims 1-4, wherein the release tab is a push tab that detaches the release tab from the one of the lid and the bottom box.
6. The carton of any one of claims 1-5, wherein the release tab comprises a first portion and a second portion hingedly connected to the first portion such that the first portion is a push tab that partially detaches the release tab from the one of the lid and the bottom box and the second portion is a pull tab that detaches the remainder of the release tab from the one of the lid and the bottom box.
7. The carton of any one of claims 1-6, further comprising at least one tab carried by a top edge of the first front wall and at least one latching feature carried by an inner surface of the second front wall such that the at least one tab engages the at least one latching feature when the lid is in the closed position to resist movement of the lid to the open position.
8. The carton of claim 7, wherein the at least one latching feature comprises a flap hingedly connected to one of either the third sidewall or fourth sidewall and secured to the inner surface of the second front wall.
9. The carton of any one of claims 1-8, wherein the adhesive comprises an adhesive label.
10. The carton of claim 9, wherein the adhesive label is attached to the release tab and the one of the lid and the bottom wall of the bottom box.
11. The carton of claim 10, wherein the release tab includes a kiss cut to improve the securement between the release tab and the adhesive label.

12. The carton of any one of claims 10-11, wherein the one of the lid and the bottom box includes a kiss cut to improve securement between the one of the lid and the bottom box and the adhesive label.
13. The carton of any one of claims 1-12, wherein the carton is made from a unitary material.
14. The carton of any one of claims 1-13, wherein the carton includes a first exterior finish with a first texture and the release tab includes a second exterior finish with a second texture, the first texture different from the second texture.
15. The carton of any one of claims 3-14, wherein the first front wall includes a cut-out adjacent to a top edge of the first front wall such that the first front wall demonstrates increased pliability relative the second front wall.
16. The carton of any one of claims 1-13, further comprising a storage cavity disposed in the bottom box and a drug delivery device containing a medicament disposed in the storage cavity.
17. A carton for medicament storage, the carton comprising:
 - a bottom box having a bottom wall, a first sidewall, a second sidewall, a back wall, and a first front wall;
 - a lid coupled to the bottom box and movable between an open position and a closed position, wherein the bottom box is closed by the lid when the lid is in the closed position;
 - a release tab comprising a portion of one of the lid and the front wall and being defined by a perforated line in the one of the lid and the first front wall; and
 - an adhesive positioned on at least a part of the release tab and selectively coupling the lid and the first front wall,wherein, when the lid is in the closed position, the release tab is secured to the one of the lid and the first front wall via an adhesive label; and
 - wherein, when the lid is in the open position, the release tab is separated along the perforated line from the one of the lid and the first front wall and is secured to the other of the lid and the first front wall via the adhesive.
18. The carton of claim 17, wherein the lid comprises a top wall and a front lip.
19. The carton of claim 18, wherein the front lip is disposed within the bottom box when the lid is in the closed position.
20. The carton of claim 17, wherein the lid comprises a third sidewall adjacent the first sidewall, a fourth sidewall adjacent the second sidewall, and a second front wall adjacent the first front wall.
21. The carton of any one of claims 17-20, wherein the release tab is a push tab that detaches the release tab from the one of the lid, the first front wall, and the second front wall.
22. The carton of any one of claims 17-21, wherein the release tab comprises a first portion and a second portion hingedly connected to the first portion such that the first portion is a push tab that partially detaches the release tab from the one of the lid, the first front wall, and the second front wall and the second portion is a pull tab that detaches the remainder of the release tab from the one of the lid, the first front wall, and the second front wall.

23. The carton of any one of claims 17-22, further comprising at least one tab carried by a top edge of the first front wall and at least one latching feature carried by an inner surface of the second front wall such that the at least one tab engages the at least one latching feature when the lid is in the closed position to resist movement of the lid to the open position.
24. The carton of claim 23, wherein the at least one latching feature comprises a flap hingedly connected to one of either the third sidewall or fourth sidewall and secured to the inner surface of the second front wall.
25. The carton of any one of claims 17-24, wherein the adhesive comprises an adhesive label including a tamper evident adhesive seal.
26. The carton of any one of claim 25, wherein the adhesive label is attached to the release tab and one of the lid, first front wall, the second front wall, and the bottom wall of the bottom box.
27. The carton of any one of claims 17-26, wherein the release tab includes a kiss cut to improve the securement between the release tab and the adhesive label.
28. The carton of any one of claims 17-27, wherein the carton is made from a unitary material.
29. The carton of any one of claims 17-28, wherein the carton includes a first exterior finish with a first texture and the release tab includes a second exterior finish with a second texture, the first texture different from the second texture.
30. The carton of any one of claims 18-29, wherein the first front wall includes a cut-out adjacent to a top edge of the first front wall such that the first front wall demonstrates increased pliability relative the second front wall.
31. The carton of any one of claims 17-30, further comprising a storage cavity disposed in the bottom box and a drug delivery device containing a medicament disposed in the storage cavity.
32. A carton for medicament storage, the carton comprising:
a bottom box having a bottom wall, a first sidewall, a second sidewall, a back wall, and a front wall;
a top movable between an open position and a closed position, the top including a top wall and a second front wall adjacent the first front wall, wherein the bottom box is disposed adjacent the top when the top is in the closed position; and
a release tab comprising a portion of the second front wall and being defined between a bottom edge of the second front wall and a perforated line in the second front wall,
wherein, when the top is in the open position and the closed position, the release tab is secured to the bottom box via an adhesive label; and
wherein, when the top is in the open position, the release tab is separated along the perforated line from the second front wall.
33. The carton of claim 32, wherein the release tab is a push tab that detaches the release tab from the second front wall.

34. The carton of claim 32, wherein the release tab comprises a first portion and a second portion hingedly connected to the first portion such that the first portion is a push tab that partially detaches the release tab from the second front wall and the second portion is a pull tab that detaches the remainder of the release tab from the second front wall.
35. The carton of any one of claims 32-34, further comprising at least one tab carried by a top edge of the first front wall and at least one latching feature carried by an inner surface of the second front wall such that the at least one tab engages the at least one latching feature when the top is in the closed position to resist movement of the top to the open position.
36. The carton of claim 35, wherein the at least one latching feature comprises a flap hingedly connected to one of either a third sidewall hingedly connected to the top or a fourth sidewall hingedly connected to the top and secured to the inner surface of the second front wall.
37. The carton of any one of claims 32-36, wherein the release tab is secured to the bottom box via an adhesive.
38. The carton of any one of claims 32-37, wherein the release tab is secured to the bottom box with an adhesive label attached to the release tab and the bottom box.
39. The carton of claim 38, wherein the adhesive label is attached to the release tab and the bottom wall of the bottom box.
40. The carton of claim 39, wherein the release tab includes a kiss cut to improve the securement between the release tab and the adhesive label.
41. The carton of any one of claims 39-40, wherein the bottom wall of the bottom box includes a kiss cut to improve securement between the bottom box and the adhesive label.
42. The carton of any one of claims 32-41, wherein the carton includes a first exterior finish with a first texture and the release tab includes a second exterior finish with a second texture, the first texture different from the second texture.
43. The carton of any one of claims 32-42, wherein the first front wall includes a cut-out adjacent to a top edge of the first front wall such that the first front wall demonstrates increased pliability relative the second front wall.
44. The carton of any one of claims 32-43, further comprising a storage cavity disposed in the bottom box and a drug delivery device containing a medicament disposed in the storage cavity.