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(54) **PILL DISPENSERS**

TABLETTENSPENDER

DISTRIBUTEURS DE COMPRIMES

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Description

[0001] The present invention relates to pill dispensers and particularly but not exclusively relates to pill dispensers for housing blister strips of the type comprising a plurality of pill pockets each containing a pill, the pockets being sealed by a foil or the like.

[0002] It is known to house blister strips in pill dispensers such that when a user wishes to take a pill, the user slides the blister strip from the dispenser to expose a pill pocket. The user then depresses the pocket so as to dispense a pill from that pocket. Such a pill dispenser, according to the preambule of claim 1, is disclosed in US 5 909 822. However current and future legislation requires that the number of pills that can be extracted from a blister strip be limited to reduce the possibility of children easily gaining access to sufficient pills to take an overdose.

[0003] According to a first aspect of the invention there is provided a hollow pill dispenser comprising a mouth at one end to slidingly receive a blister strip so that the blister strip is substantially contained within the dispenser, the dispenser being provided with engagement means which directly engages a formation provided on the blister strip to retain the blister strip within the dispenser, the dispenser further comprising release means operative to release the engagement between the formation and the engagement means so that the blister strip can be pulled from the dispenser through the mouth of the dispenser to expose a predetermined number of pills, the engagement means, when the predetermined number of pills are exposed, directly engaging another formation of the blister strip to resist further pills being exposed.

[0004] Preferably each formation comprises a protrusion projecting from the base of the blister strip. Preferably the protrusion projects from the base of the blister strip in the same direction as the pill pockets of the blister strip.

[0005] Preferably each protrusion comprises a deformable region which can be deformed by the release means so as to release the engagement between the protrusion and the engagement means. Thus the deformable region can, in use, be crushed so as to be of a reduced size that does not engage the engagement means.

[0006] Preferably the engagement means comprises a lug formed on the dispenser, the lug engaging the formation on the blister strip Preferably the lug is provided at the mouth of the dispenser so as to extend into the mouth so as to reduce the height of part of the mouth.

[0007] Alternatively each formation comprises a cut out portion of the blister strip.

[0008] Preferably each cut out portion comprises an elongate slot spaced inwardly from the side margin of the blister strip.

[0009] Alternatively each cut out portion comprises an indent formed at the side margin of the blister strip so that adjacent cut out portions between them define a fin that extends from the side margin of the blister strip and which lies in the plane of the blister strip.

[0010] Preferably each formation of the blister strip is substantially aligned with a blister strip pill pocket when the blister strip is retained in the dispenser.

[0011] Preferably each formation is formed on the blister strip at a position spaced from the longitudinal axis of the blister strip.

[0012] Preferably there are two rows of formations that are engaged by the engagement means, each row being spaced from the longitudinal axis of the blister strip so as to be adjacent a respective longitudinal margin of the blister strip.

[0013] Preferably the release means comprises a button operable externally of the dispenser, the button being aligned with the formation of the blister strip and operative such that, when depressed, the button releases the engagement between the formation and the engagement means.

[0014] Preferably the button is resiliently biased to the position in which the button does not release the engagement between the formation and the engagement means.

[0015] Preferably the button is formed integrally with the dispenser and the resilient biasing is provided by the properties of the material from which the dispenser is formed. Alternatively the button is formed separately from the dispenser and is secured to the dispenser with biasing means to provide the resilient biasing.

[0016] Alternatively, the release means and the engagement means are integral and comprise an arm pivotably mounted inside the dispenser, part of the arm having an abutment which comprises the engagement means which engages, in use, a formation of the blister strip to retain the blister strip in the dispenser until the arm is pivoted to a position in which the abutment clears the formation of the blister strip.

[0017] Preferably the arm is formed with another abutment distal from the first abutment such that when the arm is pivoted so that the first abutment clears the formation of the blister strip, the other abutment is in a position to engage another formation of the blister strip.

[0018] Preferably part of the arm is aligned with an aperture formed in the dispenser, the aperture being sized so that a user can operate the arm through the aperture.

[0019] Preferably the arm is resiliently biased to the position in which the first abutment engages the formation of the blister strip.

[0020] According to a second aspect of the invention there is provided a blister strip provided with a formation for engaging engagement means provided on the pill dispenser of the first aspect of the invention.

[0021] Other aspects of the present invention may include any combination of the features or limitations referred to herein.

[0022] The present invention may be carried into practice in various ways, but embodiments will now be described by way of example only with reference to the

accompanying drawings in which:

Figure 1 is a perspective view of a pill dispenser in accordance with the present invention;

Figure 2 is a perspective view of the dispenser of Figure 1 with a blister strip partially exposed;

Figure 3 is an end view of the dispenser of Figure 1 and 2;

Figures 4a to 4d are sectional side views of the dispenser of Figure 1 in different conditions;

Figures 5a to 5d are sectional side views of an alternative dispenser in different conditions;

Figures 6a to 6d are sectional side views of a further alternative dispenser in different conditions;

Figures 7a to 7b are sectional side views of another alternative dispenser in different conditions;

Figure 8 is a plan view of a modified dispenser;

Figure 9 is a side view of the modified dispenser of Figure 8;

Figure 10 is a sectional side view of the modified dispenser of Figures 8 and 9; and

Figure 11 is a plan view of the modified dispenser of Figures 8 to 10 in a partially disassembled condition.

[0023] Referring initially to Figures 1 and 2, a dispenser 1 comprises a substantially planar base 3 hingedly connected to a substantially planar roof 5, which together define an internal cavity 6 for housing a blister strip 7 and an elongate mouth 9 at one end of the dispenser 1 through which a blister strip 7 can be inserted. The base 3 and roof 5, at a position below and above the mouth respectively, are each formed with a respective recess 11, 13 to expose part of the blister strip 7 to allow that part of the blister strip 7 to be gripped by a user so as to pull the blister strip 7 from the dispenser.

[0024] The roof 5 of the dispenser 1 is formed with release means comprising two laterally spaced, resiliently movable buttons 15, 16 which can be pressed into the cavity 6 but which move back to their original position when the pressing force is removed.

[0025] The dispenser 1 comprises a one piece moulding wherein the base 3, the roof 5 and the buttons 15, 16 are all integrally formed. The base 3 is hinged to the roof 5 so that the base 3 and roof 5 can be pivoted together about the hinge and secured using a snap fit connection as is well known. Alternatively the base 3 and roof 5 may be formed separately as dispenser halves which are placed together and secured using a snap fit or any other suitable connection.

[0026] Referring now to Figure 3 the roof 5 of the dispenser 1 is formed with engagement means comprising two internal, downwardly projecting lugs 17. Each lug 17 is spaced from the central longitudinal axis of the dispenser 1 and serves to restrict the mouth 9 of the dispenser 1 so that the gap between each lug 17 and the base portion 3 is less than the gap between the roof 5 and the base 3. Each button 15, 16 is located behind a respective lug 17 and extends partially into the cavity 6 when in the normal condition shown in Figure 4a.

[0027] A blister strip 7 is contained within the cavity 6 and comprises a planar base 19 having two, parallel rows of blister pockets 21 extending longitudinally along the base 19. Each pocket 21 houses a pill (not shown). The blister strip 7 further comprises a plurality of formations comprising two parallel rows of upwardly extending projections 23, each of which comprises a ramped surface 25 extending from the blister strip base 19 to an abutment surface 27 which is substantially perpendicular to the base 19.

[0028] It will be appreciated that the dimensions of the dispenser 1 are such that the two rows of blister pockets 21 are positioned between the two lugs 17 so as not to engage the lugs 17, whilst the rows of projections 23 are spaced outwardly from the rows of blister pockets 21 so as to be aligned with the lugs 17. Each abutment surface 27 is sufficiently high that the projections 23 will not fit through the gap between the respective lug 17 and the dispenser base 3, and thus when the blister strip 7 is located in the dispenser the lugs 17 engage the abutment surfaces 27 at the front of the blister strip 7 so that the blister strip 7 is captively retained in the dispenser 1. If a user pulls on the end of the blister strip 1, the lugs 17 engage the formations 23 so as to resist movement of the blister strip 7 relative to the dispenser. This is shown in Figure 4a.

[0029] When a user wishes to dispense a pill from the blister strip 7, the user must depress both buttons 15, 16 so that the underside of the buttons 15, 16 engage the top of the projections 23 on the blister strip 7. The user must then continue pressing the buttons 15, 16 with an increased force so that the buttons 15, 16 deform the protrusions 23 on the blister strip 7 by crushing the protrusions 23 towards the blister strip base 19 as shown in Figure 4b. Once the protrusions 23 have been crushed to a height that is less than the gap between the lugs 17 and the dispenser base 3, the blister strip 7 can be gripped and pulled from the dispenser 1 so as to expose the first blister pocket 21 in each row. The user must then burst the blister pocket or pockets 21 to dispense the pills contained in those pockets 21. This is shown in Figure 4c.

[0030] So a single depression of the buttons 15, 16 allows only two blister pockets 21 to be exposed and therefore only two pills to be dispensed and taken by a user of the dispenser 1. It will be appreciated that once the front two protrusions 23 have been crushed, the re-

maining protrusions 23 spaced in the two rows along the blister strip base 19 remain uncrushed. Thus, if the user continues to pull the blister strip 7 from the dispenser, the next pair of uncrushed protrusions 23 engage either the buttons 15,16, if the buttons remain depressed, or engage the lugs 17, if the buttons 15, 16 have been released, see Figure 4d. Thus the dispenser 1 provides a dosage limiting device to limit how many pills can be dispensed from a single depression of the buttons 15, 16. This provides a significant degree of child resistance in that a number of sequential steps need to be taken by the child to obtain access to the first pair of pills, whilst yet more steps need be taken to gain access to further pills.

[0031] Referring now to Figure 5, an alternative engagement means and release means are shown in the form of an arm 29 that is pivotally mounted on part of the dispenser 1 within the cavity of the dispenser 1. The pivot axis of the arm 29 extends between the sides of the dispenser so as to be substantially vertical. The arm 29 comprises a forward portion 31 which terminates in an abutment 33, and a rearward portion 35 that terminates in another abutment 37. The abutments 33, 37 extend substantially perpendicularly from the respective arm portion 33, 35. The top of rearward arm portion 35 is provided with a button 41 which a user can access from the exterior of the dispenser 1. It will be appreciated that the mouth 9 of the dispenser 1 of this embodiment is not provided with the lugs 17 and thus the mouth 9 is unrestricted. The arm portions 31, 35 are inclined relative to one another so as to define an internal angle which is less than 180°. This is to provide the space within the cavity 6 to be able to pivot the arm 29.

[0032] The arm 29 is pivotable between a first position in which the abutment 33 of forward arm portion 31 is at a height to engage a projection 23 on the blister strip 7, and a second position in which the abutment 33 is raised sufficiently to allow the projection 23 to pass beneath the abutment 33. When in the first position, the abutment 37 of rearward arm portion 35 is sufficiently high to allow the projections 23 to pass under the abutment 37, and the button 41 extends through the top 5 of the dispenser 1. The arm 29 is resiliently biased to the first position such that a force must be applied to overcome the biasing force to move the arm 29 to the second position.

[0033] When in the first position the abutment 33 engages the front projection 23 of the blister strip 7 to resist a user pulling the blister strip 7 from the dispenser 1. This is shown in Figure 5a. The user then depresses the button 41 by applying sufficient force to overcome the biasing force biasing the arm 29 to the first position so that the rearward arm portion 35 pivots downwardly into the dispenser cavity 6, and the forward arm portion 31 and abutment 33 pivot upwardly so that the abutment 33 clears the top of the protrusion 23.

[0034] Whilst depressing the button 41, the user simultaneously pulls the blister strip 7 to expose the first pair of blister pockets 21. Once exposed, the user can burst the pockets 21 to dispense the two pills contained in those pockets 21.

[0035] If the button 41 remains depressed, the rearward abutment 37 is at a height to engage the next pair of protrusions 23 to resist the blister strip 7 from being pulled further from the dispenser 1. If the button 41 is released, the biasing force pivots the arm 29 to the first position such that the forward abutment 33 engages the next pair of protrusions 23 to resist further blister pockets 21 of the blister strip 7 being exposed.

[0036] A pair of arms 29 is provided, each of which is aligned with a respective row of protrusions 23. Alternatively only a single arm 29 may be provided so as to be aligned with a single row of protrusions 23.

[0037] Referring now to Figure 6, an alternative blister strip 47, has similar features to the blister strip 7 above, but with the protrusions 23 removed. Instead the blister strip 47 is provided with formations comprising two parallel rows of cut outs 49, the cut outs 49 in each row being longitudinally spaced along the blister strip 47. Each cut out 49 comprises an elongate slot although it will be appreciated that any suitable shape of cut out 49 could alternatively be provided. Each row of cut outs 49 is aligned with respective abutments 33, 37 of arms 29 when the blister strip 47 is located within the cavity 6 of the dispenser 1.

[0038] Each arm 29 is pivotable between a first position, in which the forward abutment 33 is received in a cut-out 49 so as to engage the rearward end of the cut out 49, and a second position in which the forward abutment 33 is located above and not received in the cut out 49. When the arm 29 is in the first position, the rearward abutment 37 is positioned above the next cut out 49, and when the arm 29 is in the second position, the rearward abutment 37 is received in the next cut out 49. Again, the arm 29 is biased to the first position.

[0039] To dispense a pill from the blister strip 1, the user depresses the arm 29 by applying pressure to the button 41. This pivots the arm 29 from the first position to the second position. The forward abutment 33 is then above the first cut out 49 and does not engage the first cut out 49. The user can then pull the blister strip 47 from the dispenser 1 to expose the first row of blister pockets 21.

[0040] However, when in the second position, the rearward abutment 37 is at a height so as to be received in the next cut out 49 and thus engages the end of that cut out 49 if the user continues to pull the blister strip 47 to expose further blister pockets 21. If the user releases the button 41, the arm 29 is biased back to the first position so that the forward lug 33 is received in the next cut out 49 to engage that cut out 49 and resist further pulling of the blister strip 47. Thus the child resistance is operable whether the button 41 is depressed or not.

[0041] Referring now to Figure 7, an alternative dispenser 51 has similar features to dispenser 1 except that the arm 29 is secured to the dispenser 51 so that the button 41 extends from the side of the dispenser 51 rather

than the roof 5. The pivot axis of the arm 29 in this embodiment thus extends between the base 3 and roof 5 of the dispenser 51 so as to be substantially vertical.

[0042] The dispenser 51 is used with an alternative blister strip 57 each longitudinal side of which is provided with formations comprising a plurality of fins 53 that project perpendicularly from the longitudinal axis of the blister strip 57 in the plane of the base 19. Each fin 53 is defined between two respective cut outs 54. Thus when viewed in plan, the sides of the blister strip 57 are castellated.

[0043] The arm 29 of this embodiment is biased to a first position in which the forward abutment 33 engages a first fin 53 of the blister strip 57 to resist a user pulling the blister strip 57 from the dispenser 51. When the user presses the button 41, the arm 29 pivots to a second position in which the forward abutment 33 does not engage the first fin 53. The user can then pull the blister strip 57 from the dispenser 51 to expose the first pair of blister pockets 21. if the button 41 remains depressed, the rearward abutment 37 engages the next fin 53, whilst if the button 41 is released, the arm 29 is biased back to the first position in which the forward abutment 33 can engage the next fin 53.

[0044] Referring to Figures 8 to 11, a further alternative dispenser 61 is provided with only a single arm 69 which is axially aligned with the longitudinal axis of the dispenser 61. The arm 69 has similar features to the arm 29 described above except that the arm 69 is provided with two buttons 70, 71 each being positioned on a respective forward and rearward arm portion 72, 73 of the arm 69. The operation of the arm 69 is as described above in relation to Figures 4 and 5 except that the blister strip 7 would only have a single row of protrusions 23 or cut outs 49, 54 that are aligned with the longitudinal axis of the blister strip 7 so as to be located between the two rows of blister pockets 21.

[0045] It will be appreciated that the dispenser 1 could be used with blister strips 7 having only a single row of blister pockets 21, or having more than two rows of blister pockets 21. The number of rows provided will depend on how many pills it is considered, or it is legislated to be safe, to be dispensed at one time.

[0046] In all of the embodiments above, only a single row of formations can be provided instead of the parallel rows of formations described. In that case only a single engagement means and release means would be provided. However the advantage of having two rows of formations is that the user must depress two buttons simultaneously to expose a pair of blister pockets. Depressing two buttons simultaneously provides an enhanced degree of child resistance when compared to only depressing a single button.

[0047] The biasing of the buttons or arms described above may be provided by the resilient properties of the materials used, or may be provided by a separate biasing means such as a spring which acts against the button or arm concerned.

Claims

1. A hollow pill dispenser (1) comprising a mouth (9) at one end to slidingly receive a blister strip (7) so that the blister strip (7) is substantially contained within the dispenser (1), **characterized by** engagement means (17, 29) which directly engages a formation (23, 49) provided on the blister strip (7) to retain the blister strip (7) within the dispenser (1), the dispenser (1) further comprising release means (15, 16, 29) operative to release the engagement between the formation (23, 49) and the engagement means (17, 29) so that the blister strip (7) can be pulled from the dispenser (1) through the mouth (9) of the dispenser (1) to expose a predetermined number of pills, the engagement means (17, 29), when the predetermined number of pills are exposed, directly engaging another formation (23, 49) of the blister strip (7) to resist further pills being exposed.

2. The pill dispenser (1) of claim 1 wherein the engagement means (17, 29) engages, in use, a formation (23) comprising a protrusion projecting from the base of the blister strip (7).

3. The pill dispenser (1) of claim 2 wherein the engagement means (17, 29) engages, in use, a protrusion (23) which projects from the base of the blister strip (7) in the same direction as the pill pockets (21) of the blister strip (7).

4. The pill dispenser (1) of claim 2 or claim 3 wherein the engagement means (17, 29) engages, in use, a protrusion (23) comprising a deformable region which can be deformed by the release means (15, 16, 29) so as to release the engagement between the protrusion (23) and the engagement means (17, 29).

5. The pill dispenser (1) of claim 4 wherein the engagement means (17, 29) engages, in use, a deformable region which can, in use, be crushed so as to be of a reduced size that does not engage the engagement means (17, 29).

6. The pill dispenser (1) of any preceding claim wherein the engagement means (17, 29) comprises a lug (17) formed on the dispenser (1), the lug (17) engaging the formation (23) on the blister strip (7).

7. The pill dispenser (1) of claim 6 wherein the lug (17) is provided at the mouth (9) of the dispenser (1) so as to extend into the mouth (9) so as to reduce the height of part of the mouth (9).

8. The pill dispenser (1) of claim 1 wherein the engagement means (17, 29) engages, in use, a formation comprising a cut out portion (49) of the blister strip

(7).

9. The pill dispenser (1) of claim 8 wherein the engagement means (17, 29) engages, in use, a cut out portion (49) comprising an elongate slot spaced inwardly from the side margin of the blister strip (7).

10. The pill dispenser (1) of claim 8 wherein the engagement means (17, 29) engages, in use, a cut out portion (49) comprising an indent formed at the side margin of the blister strip (7) so that adjacent cut out portions (49) between them define a fin that extends from the side margin of the blister strip and which lies in the plane of the blister strip (7).

11. The pill dispenser (1) of any one of the preceding claims wherein each formation (23, 49) of the blister strip (7) is substantially aligned with a blister strip pill pocket (21) when the blister strip (7) is retained in the dispenser (1).

12. The pill dispenser (1) of any one of the preceding claims wherein the engagement means (17, 29) engages, in use, a formation (23, 49) formed on the blister strip (7) at a position spaced from the longitudinal axis of the blister strip (7).

13. The pill dispenser (1) of claim 12 wherein the engagement means (17, 29) engages, in use, two rows of formations (23, 49), each row being spaced from the longitudinal axis of the blister strip (7) so as to be adjacent a respective longitudinal margin of the blister strip (7).

14. The pill dispenser (1) of any one of the preceding claims wherein the release means (15, 16, 29) comprises a button (15) operable externally of the dispenser (1), the button (15) being aligned with the formation (23, 49) of the blister strip (7) and operative such that, when depressed, the button (15) releases the engagement between the formation (23, 49) and the engagement means (17, 29).

15. The pill dispenser (1) of claim 14 wherein the button (15) is resiliently biased to the position in which the button (15) does not release the engagement between the formation (23, 49) and the engagement means (17, 29).

16. The pill dispenser (1) of claim 14 or claim 15 wherein the button (15) is formed integrally with the dispenser (1) and the resilient biasing is provided by the properties of the material from which the dispenser (1) is formed.

17. The pill dispenser (1) of claim 14 or claim 15 wherein the button (15) is formed separately from the dispenser (1) and is secured to the dispenser (1) with biasing means to provide the resilient biasing.

18. The pill dispenser (1) of any one of claims 1 to 13 wherein the release means (15, 16, 29) and the engagement means (17, 29) are integral and comprise an arm (29) pivotably mounted inside the dispenser (1), part of the arm (29) having an abutment (33) which engages, in use, a formation (23, 49) of the blister strip (7) to retain the blister strip (7) in the dispenser (1) until the arm (29) is pivoted to a position in which the abutment (33) clears the formation (23, 49) of the blister strip (7).

19. The pill dispenser (1) of claim 18 wherein the arm (29) is formed with another abutment (37) distal from the first abutment (33) such that when the arm (29) is pivoted so that the first abutment (33) clears the formation (23, 49) of the blister strip (7), the other abutment (37) is in a position to engage another formation (23, 49) of the blister strip (7).

20. The pill dispenser (1) of claim 18 or claim 19 wherein part of the arm (29) is aligned with an aperture formed in the dispenser (1), the aperture being sized so that a user can operate the arm (29) through the aperture.

21. The pill dispenser (1) of any one of claims 18 to 20 wherein the arm (29) is resiliently biased to the position in which the first abutment (33) engages the formation (23, 49) of the blister strip (7).

22. A blister strip (7) provided with a formation (23, 49) for engaging engagement means (17, 29) provided on the pill dispenser (1) of claims 1 to 21.

Patentansprüche

1. Hohler Tablettenspender (1) mit einer Öffnung (9) an einem Ende, um einen Blisterstreifen (7) verschiebbar aufzunehmen, so dass der Blisterstreifen (7) im Wesentlichen in dem Spender (1) enthalten ist, **gekennzeichnet durch** ein Eingriffsmittel (17, 29), das direkt in ein Gebilde (23, 49) eingreift, das auf dem Blisterstreifen (7) vorgesehen ist, um den Blisterstreifen (7) innerhalb des Spenders (1) zu halten, wobei der Spender (1) des Weiteren ein Freigabemittel (15, 16, 29) umfasst, das tätig ist, um den Eingriff zwischen dem Gebilde (23, 49) und der Eingriffseinrichtung (17, 29) zu lösen, so dass der Blisterstreifen (7) **durch** die Öffnung (9) des Spenders (1) aus dem Spender (1) gezogen werden kann, um eine vorgegebene Anzahl von Tabletten freizulegen, wobei das Eingriffsmittel (17, 29), wenn die vorgegebene Anzahl von Tabletten freiliegt, direkt in ein anderes Gebilde (23, 49) des Blisterstreifens (7) eingreift, um zu verhindern, dass weitere Tabletten freigelegt werden.

2. Tablettenspender (1) nach Anspruch 1, wobei das Eingriffsmittel (17, 29) im Gebrauch in ein Gebilde (23) eingreift, das eine von der Basis des Blisterstreifens (7) abstehende Nase umfasst.

3. Tablettenspender (1) nach Anspruch 2, wobei das Eingriffsmittel (17, 29) im Gebrauch in eine Nase (23) eingreift, die von der Basis des Blisterstreifens (7) in dieselbe Richtung wie die Tablettenfächer (21) des Blisterstreifens absteht.

4. Tablettenspender (1) nach Anspruch 2 oder Anspruch 3, wobei das Eingriffsmittel (17, 29) im Gebrauch in eine Nase (23) eingreift, die einen deformierbaren Bereich aufweist, der durch das Freigabemittel (15, 16, 29) deformiert werden kann, um den Eingriff zwischen der Nase (23) und dem Eingriffsmittel (17, 29) zu lösen.

5. Tablettenspender (1) nach Anspruch 4, wobei das Eingriffsmittel (17, 29) im Gebrauch in einen deformierbaren Bereich eingreift, der im Gebrauch so zerdrückt werden kann, dass er von einer reduzierten Größe ist, die nicht in das Eingriffsmittel (17, 29) eingreift.

6. Tablettenspender (1) nach irgendeinem der vorhergehenden Ansprüche, wobei das Eingriffsmittel (17, 29) einen auf dem Spender ausgebildeten Ansatz (17) umfasst, wobei der Ansatz (17) in das Gebilde (23) auf dem Blisterstreifen (7) eingreift.

7. Tablettenspender (1) nach Anspruch 6, wobei der Ansatz (17) an der Öffnung (9) des Spenders (1) so vorgesehen ist, dass er sich in die Öffnung (9) erstreckt, so dass er die Höhe eines Teils der Öffnung (9) verringert.

8. Tablettenspender (1) nach Anspruch 1, wobei das Eingriffsmittel (17, 29) im Gebrauch in ein Gebilde eingreift, das einen ausgeschnittenen Abschnitt (49) des Blisterstreifens (7) umfasst.

9. Tablettenspender (1) nach Anspruch 8, wobei das Eingriffsmittel (17, 29) im Gebrauch in einen ausgeschnittenen Abschnitt (49) eingreift, der einen länglichen Schlitz umfasst, der von dem Seitenrand des Blisterstreifens (7) nach innen beabstandet ist.

10. Tablettenspender (1) nach Anspruch 8, wobei das Eingriffsmittel (17, 29) im Gebrauch in einen ausgeschnittenen Abschnitt (49) eingreift, der einen am Seitenrand des Blisterstreifens (7) ausgebildeten Einschnitt umfasst, so dass benachbarte ausgeschnittene Abschnitte (49) zwischen ihnen einen Grat begrenzen, der sich von dem Seitenrand des Blisterstreifens erstreckt und der in der Ebene des Blisterstreifens (7) liegt.

11. Tablettenspender (1) nach irgendeinem der vorhergehenden Ansprüche, wobei jedes Gebilde (23, 49) des Blisterstreifens im Wesentlichen mit einem Blisterstreifen-Tablettenfach (21) ausgerichtet ist, wenn der Blisterstreifen (7) in dem Spender (1) gehalten wird.

12. Tablettenspender (1) nach irgendeinem der vorhergehenden Ansprüche, wobei das Eingriffsmittel (17, 29) im Gebrauch in ein Gebilde eingreift (23, 49), das auf dem Blisterstreifen (7) an einer von der Längsachse des Blisterstreifens (7) beabstandeten Position ausgebildet ist.

13. Tablettenspender (1) nach Anspruch 12, wobei das Eingriffsmittel (17, 29) im Gebrauch in zwei Reihen von Gebilden (23, 49) eingreift, wobei jede Reihe von der Längsachse des Blisterstreifens (7) beabstandet ist, um neben einem jeweiligen Längsrand des Blisterstreifens (7) zu liegen.

14. Tablettenspender (1) nach irgendeinem der vorhergehenden Ansprüche, wobei das Freigabemittel (15, 16, 29) einen Druckknopf (15) umfasst, der außerhalb des Spenders (1) betätigbar ist, wobei der Druckknopf (15) mit dem Gebilde (23, 49) des Blisterstreifens (7) ausgerichtet und so tätig ist, dass der Druckknopf (15), wenn er gedrückt wird, den Eingriff zwischen dem Gebilde (23, 49) und dem Eingriffsmittel (17, 29) freigibt.

15. Tablettenspender (1) nach Anspruch 14, wobei der Druckknopf (15) elastisch zu der Position vorgespannt ist, an der der Druckknopf (15) nicht den Eingriff zwischen dem Gebilde (23, 49) und dem Eingriffsmittel (17, 29) freigibt.

16. Tablettenspender (1) nach Anspruch 14 oder Anspruch 15, wobei der Druckknopf (15) einstückig mit dem Spender (1) ausgebildet ist und das elastische Vorspannen durch die Eigenschaften des Materials vorgesehen ist, aus dem der Spender (1) ausgebildet ist.

17. Tablettenspender (1) nach Anspruch 14 oder Anspruch 15, wobei der Druckknopf (15) getrennt von dem Spender (1) ausgebildet ist und an dem Spender (1) mit Vorspannmitteln befestigt ist, um das elastische Vorspannen vorzusehen.

18. Tablettenspender (1) nach irgendeinem der Ansprüche 1 bis 13, wobei das Freigabemittel (15, 16, 29) und das Eingriffsmittel (17, 29) einstückig sind und einen Arm (29) umfassen, der schwenkbar innerhalb des Spenders (1) angebracht ist, wobei ein Teil des Arms (29) ein Widerlager (33) aufweist, das im Gebrauch in ein Gebilde (23, 49) des Blisterstreifens (7) eingreift, um den Blisterstreifen (7) in dem Spen-

der (1) zu halten, bis der Arm (29) in eine Position geschwenkt wird, in der das Widerlager (33) das Gebilde (23, 49) des Blisterstreifens (7) entfernt.

19. Tablettenspender (1) nach Anspruch 18, wobei der Arm (29) mit einem weiteren Widerlager (37) distal von dem ersten Widerlager (33) so ausgebildet ist, dass, wenn der Arm (29) so geschwenkt wird, dass das erste Widerlager (33) das Gebilde (23, 49) des Blisterstreifens entfernt, das andere Widerlager (37) sich in einer Position befindet, um in ein anderes Gebilde (23, 49) des Blisterstreifens (7) einzugreifen.

20. Tablettenspender (1) nach Anspruch 18 oder Anspruch 19, wobei ein Teil des Arms (29) mit einem in dem Spender (1) ausgebildeten Durchlass ausgerichtet ist, wobei der Durchlass so dimensioniert ist, dass ein Benutzer den Arm (29) durch den Durchlass betätigen kann.

21. Tablettenspender (1) nach irgendeinem der Ansprüche 18 bis 20, wobei der Arm (29) elastisch zu der Position vorgespannt ist, an der das erste Widerlager (33) in das Gebilde (23, 49) des Blisterstreifens (7) eingreift.

22. Blisterstreifen (7), der mit einem Gebilde (23, 49) versehen ist, um mit einem auf dem Tablettenspender (1) der Ansprüche 1 bis 21 vorgesehenen Eingriffsmittel (17, 29) in Eingriff zu treten.

Revendications

1. Distributeur de comprimés (1) comprenant une bouchure (9) à une extrémité pour recevoir une bande d'emballage coque (7) de façon coulissante de telle sorte que la bande d'emballage coque (7) est sensiblement retenue à l'intérieur du distributeur (1), **caractérisé par** des moyens de mise en prise (17, 29) qui mettent en prise directement une formation (23, 49) prévue sur la bande d'emballage coque (7) de façon à contenir la bande d'emballage coque (7) à l'intérieur du distributeur (1), le distributeur (X) comprenant par ailleurs des moyens de désengagement (15, 16, 29) qui ont pour fonction de libérer la mise en prise entre la formation (23, 49) et les moyens de mise en prise (17, 29) de telle sorte que la bande d'emballage coque (7) peut être extraite hors du distributeur (1) par la bouchure (9) du distributeur (1) de façon à exposer un nombre prédéterminé de comprimés, les moyens de mise en prise (17, 29) - quand le nombre prédéterminé de comprimés est exposé - mettant en prise directement une autre formation (23, 49) de la bande d'emballage coque (7) afin d'empêcher que d'autres comprimés ne soient exposés.

2. Distributeur de comprimés (1) selon la revendication 1 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une formation (23) comprenant une protubérance qui fait saillie à partir de la base de la bande d'emballage coque (7).

3. Distributeur de comprimés (1) selon la revendication 2 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une protubérance (23) qui fait saillie à partir de la base de la bande d'emballage coque (7) dans la même direction que les alvéoles (21) contenant les comprimés de la bande d'emballage coque (7).

4. Distributeur de comprimés (1) selon la revendication 2 ou 3 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une protubérance (23) comprenant une région déformable qui peut être déformée par les moyens de désengagement (15, 16, 29) de façon à libérer la mise en prise entre la protubérance (23) et les moyens de mise en prise (17, 29).

5. Distributeur de comprimés (1) selon la revendication 4 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une région déformable qui - à l'utilisation - peut être écrasée de façon à prendre une taille réduite que les moyens de mise en prise (17, 29) ne peuvent pas mettre en prise.

6. Distributeur de comprimés (1) selon l'une quelconque des revendications précédentes dans lequel les moyens de mise en prise (17, 29) comprennent une patte (17) formée sur le distributeur (1), la patte (17) mettant en prise la formation (23) sur la bande d'emballage coque (7).

7. Distributeur de comprimés (1) selon la revendication 6 dans lequel la patte (17) est prévue au niveau de la bouchure (9) du distributeur (1) de façon à s'étendre à l'intérieur de la bouchure (9) de façon à réduire la hauteur d'une partie de la bouchure (9).

8. Distributeur de comprimés (1) selon la revendication 1 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une formation comprenant une portion découpée (49) de la bande d'emballage coque (7).

9. Distributeur de comprimés (1) selon la revendication 8 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une portion découpée (49) comprenant une fente allongée espacée vers l'intérieur par rapport à la marge de côté de la bande d'emballage coque (7).

10. Distributeur de comprimés (1) selon la revendication 8 dans lequel - à l'utilisation - les moyens de mise

en prise (17, 29) mettent en prise une portion découpée (49) comprenant une indentation formée au niveau de la marge de côté de la bande d'emballage coque (7) de telle sorte que des portions découpées adjacentes (49) définissent entre elles une ailette qui s'étend depuis la marge de côté de la bande d'emballage coque et qui se situe sur le plan de la bande d'emballage coque (7).

11. Distributeur de comprimés (1) selon l'une quelconque des revendications précédentes dans lequel chaque formation (23, 49) de la bande d'emballage coque (7) est sensiblement alignée avec une alvéole contenant un comprimé (21) de la bande d'emballage coque quand la bande d'emballage coque (7) est retenue à l'intérieur du distributeur (1).

12. Distributeur de comprimés (1) selon l'une quelconque des revendications précédentes dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise une formation (23, 49) qui est formée sur la bande d'emballage coque (7) à une position espacée par rapport à l'axe longitudinal de la bande d'emballage coque (7).

13. Distributeur de comprimés (1) selon la revendication 12 dans lequel - à l'utilisation - les moyens de mise en prise (17, 29) mettent en prise deux rangées de formations (23, 49), chaque rangée étant espacée par rapport à l'axe longitudinal de la bande d'emballage coque (7) de façon à être adjacente à une marge longitudinale respective de la bande d'emballage coque (7).

14. Distributeur de comprimés (1) selon l'une quelconque des revendications précédentes dans lequel les moyens de désengagement (15, 16, 29) comprennent une touche (15) qui peut être actionnée depuis l'extérieur du distributeur (1), la touche (15) étant alignée avec la formation (23, 49) de la bande d'emballage coque (7) et fonctionnant de telle sorte que - quand elle est appuyée - la touche (15) libère la mise en prise entre la formation (23, 49) et les moyens de mise en prise (17, 29).

15. Distributeur de comprimés (1) selon la revendication 14 dans lequel la touche (15) est sollicitée de façon résiliente vers la position dans laquelle la touche (15) ne libère pas la mise en prise entre la formation (23, 49) et les moyens de mise en prise (17, 29).

16. Distributeur de comprimés (1) selon la revendication 14 ou 15 dans lequel la touche (15) est formée d'une seule pièce avec le distributeur (1) et la sollicitation résiliente est fournie par les propriétés du matériau à partir duquel le distributeur (1) est réalisé.

17. Distributeur de comprimés (1) selon la revendication 14 ou 15 dans lequel la touche (15) est formée séparément du distributeur (1) et elle est fixée au distributeur (1) par des moyens de sollicitation de façon à fournir la sollicitation résiliente.

18. Distributeur de comprimés (1) selon l'une quelconque des revendications 1 à 13 dans lequel les moyens de désengagement (15, 16, 29) et les moyens de mise en prise (17, 29) sont formés d'une seule pièce et comprennent un bras (29) monté de façon pivotante à l'intérieur du distributeur (1), une partie du bras (29) comprenant une butée (33) qui - à l'utilisation - engage une formation (23, 49) de la bande d'emballage coque (7) de façon à retenir la bande d'emballage coque (7) à l'intérieur du distributeur (1) jusqu'à ce que le bras (29) pivote à une position dans laquelle la butée (33) libère la formation (23, 49) de la bande d'emballage coque (7).

19. Distributeur de comprimés (1) selon la revendication 18 dans lequel le bras (29) comprend une autre butée (37) distale par rapport à la première butée (33) de telle sorte que, quand le bras (29) pivote de telle sorte que la première butée (33) libère la formation (23, 49) de la bande d'emballage coque (7), l'autre butée (37) se trouve dans une position où elle engage une autre formation (23, 49) de la bande d'emballage coque (7).

20. Distributeur de comprimés (1) selon la revendication 18 ou 19 dans lequel une partie du bras (29) est alignée avec une ouverture formée dans le distributeur (1), l'ouverture étant dimensionnée de telle sorte qu'un utilisateur peut faire fonctionner le bras (29) à travers l'ouverture.

21. Distributeur de comprimés (1) selon l'une quelconque des revendications 18 à 20 dans lequel le bras (29) est sollicité de façon résiliente vers la position dans laquelle la première butée (33) met en prise la formation (23, 49) de la bande d'emballage coque (7).

22. Bande d'emballage coque (7) comportant une formation (23, 49) pour la mise en prise avec des moyens de mise en prise (17, 29) qui sont prévus sur le distributeur de comprimés (1) selon les revendications 1 à 21.

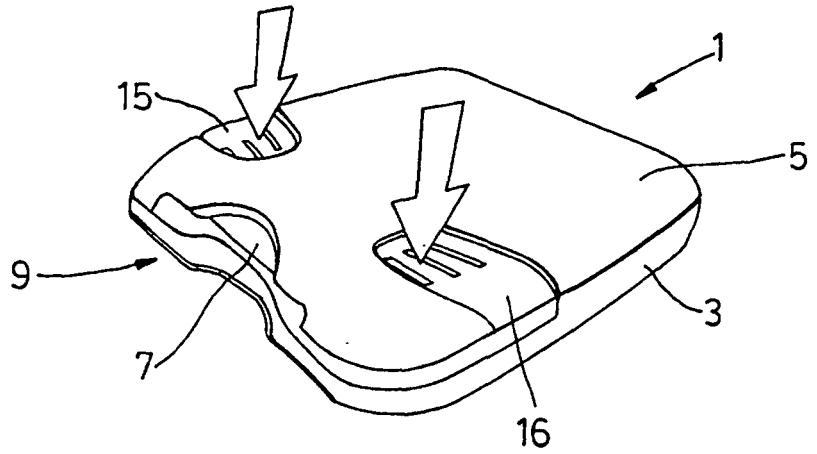

Fig. 1

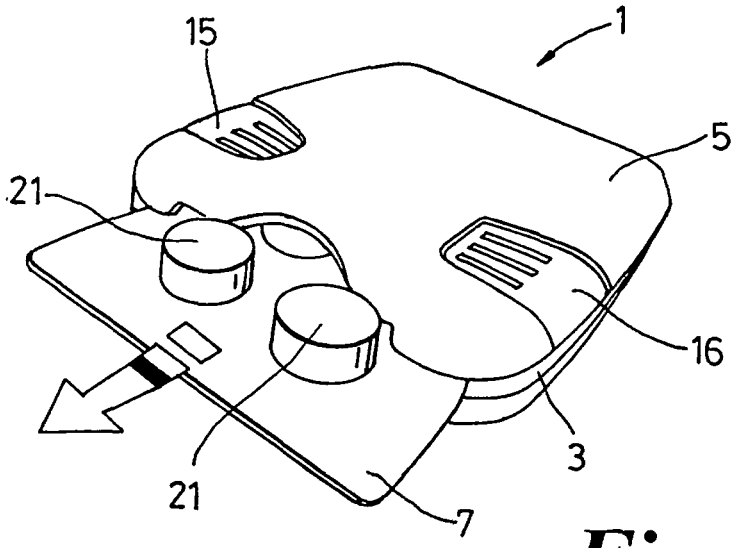

Fig. 2

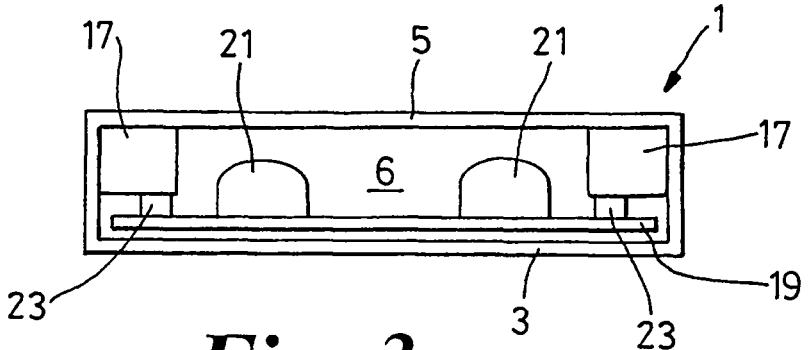

Fig. 3

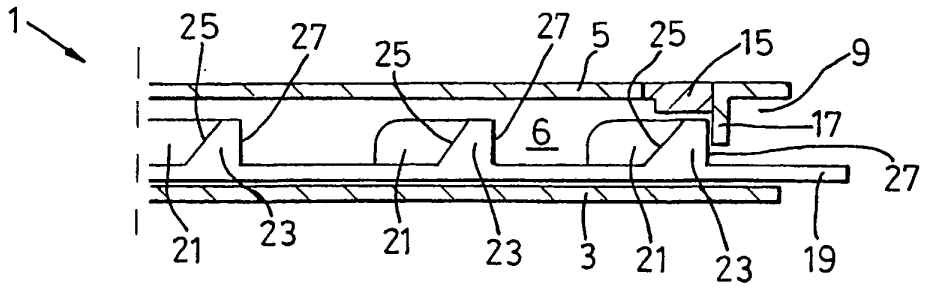

Fig. 4a

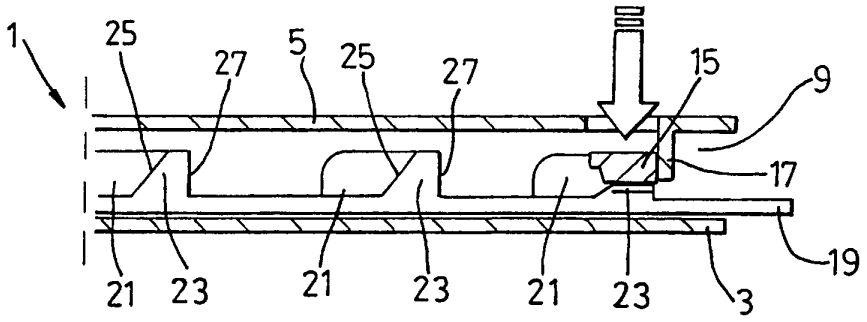

Fig. 4b

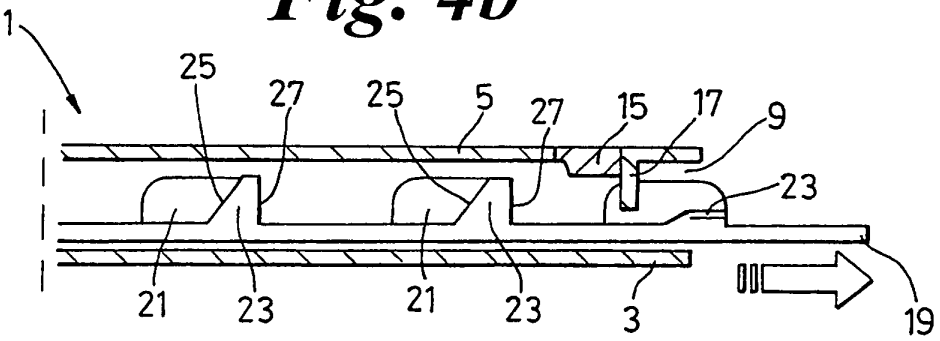

Fig. 4c

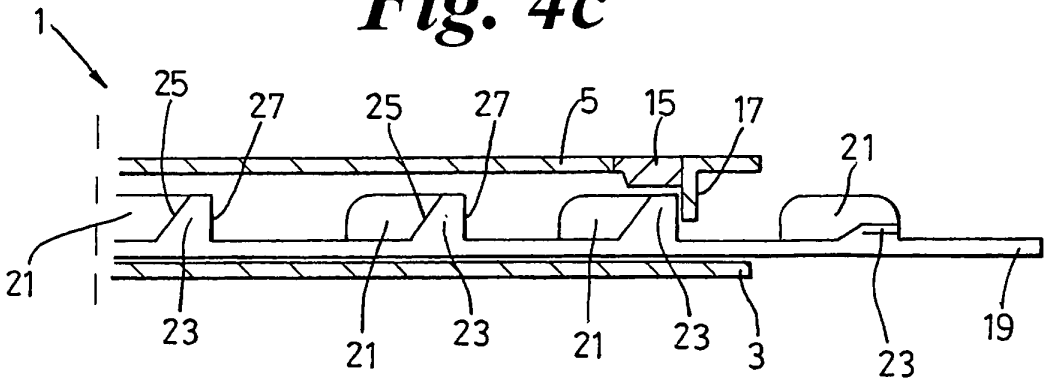

Fig. 4d

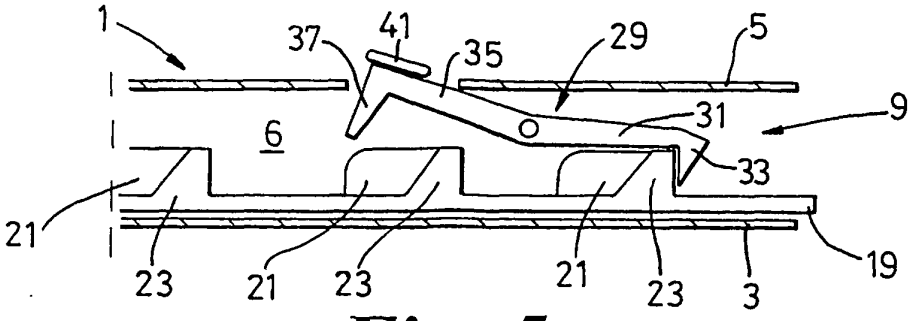

Fig. 5a

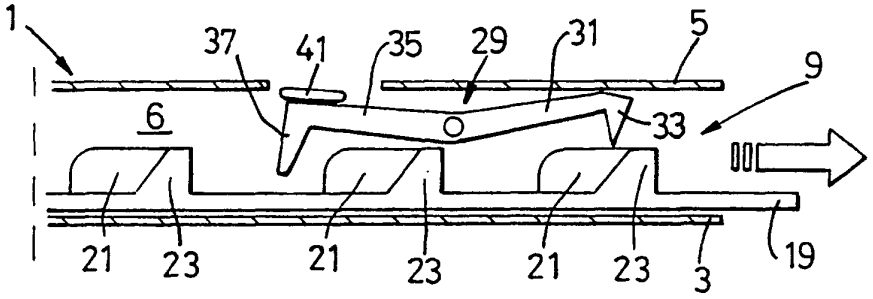

Fig. 5b

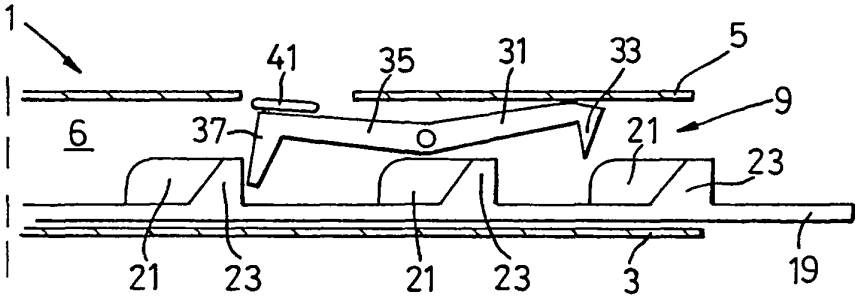

Fig. 5c

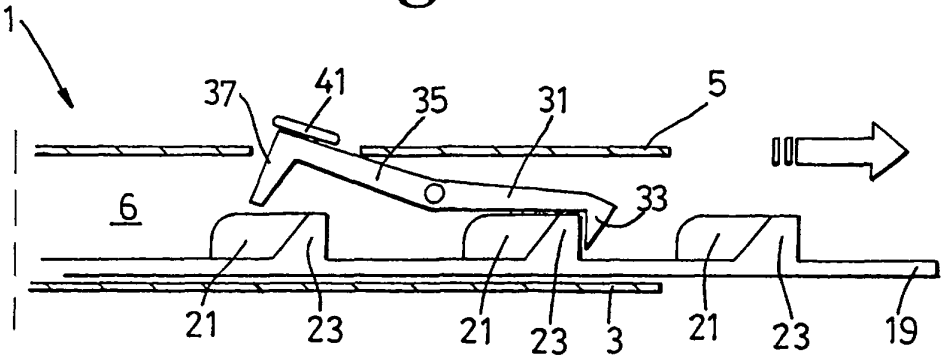

Fig. 5d

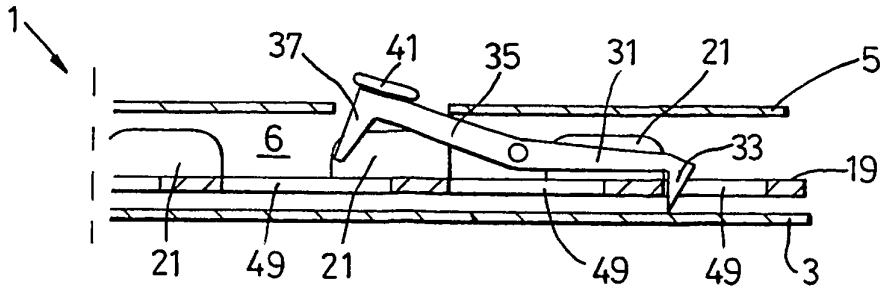

Fig. 6a

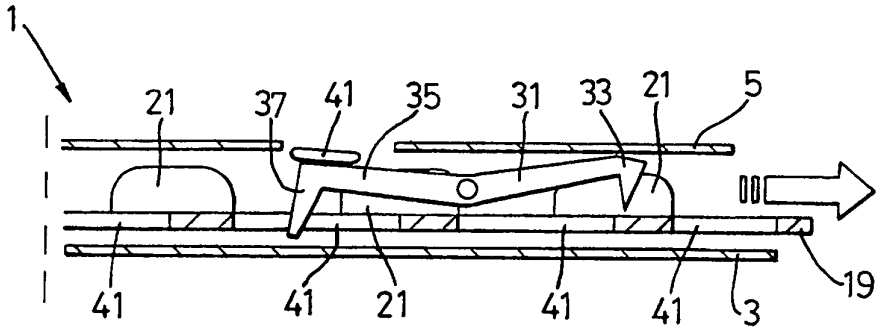

Fig. 6b

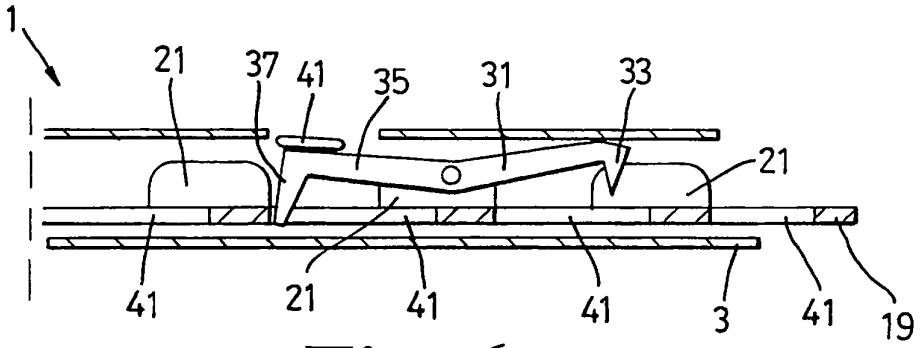

Fig. 6c

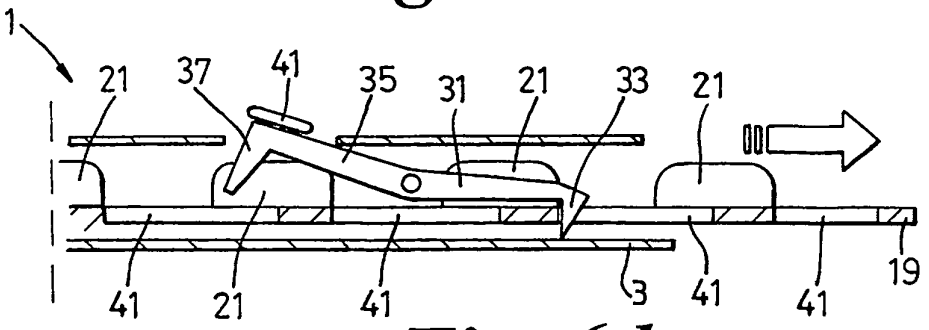

Fig. 6d

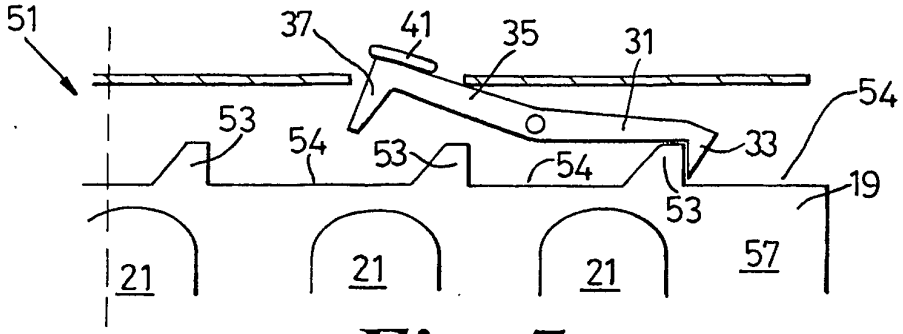

Fig. 7a

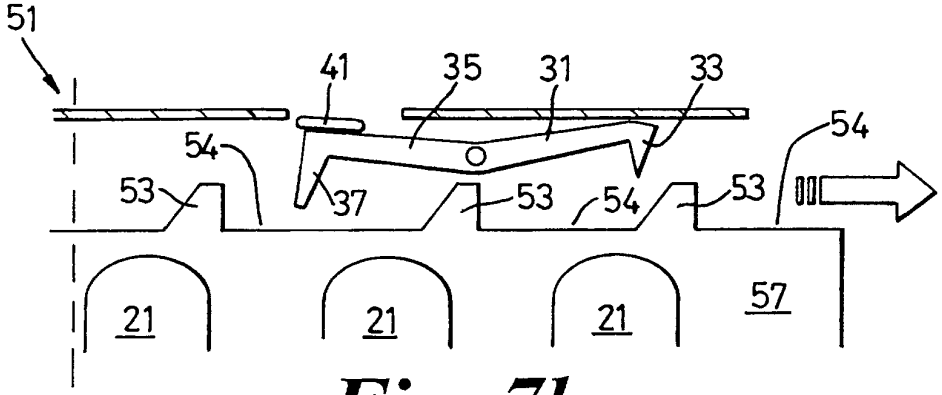

Fig. 7b

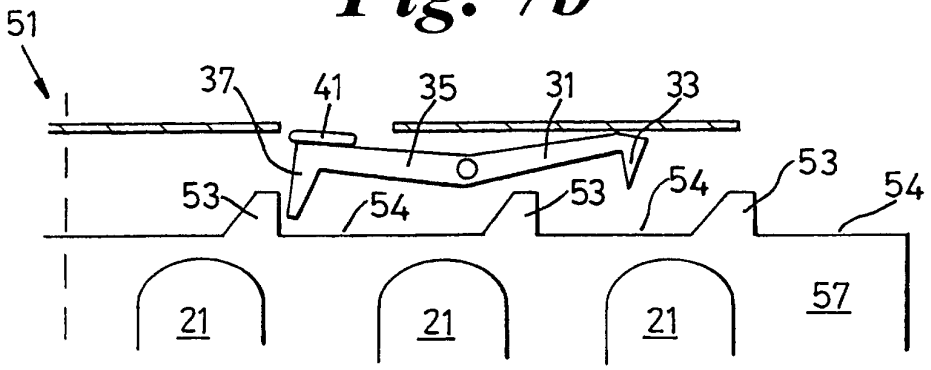

Fig. 7c

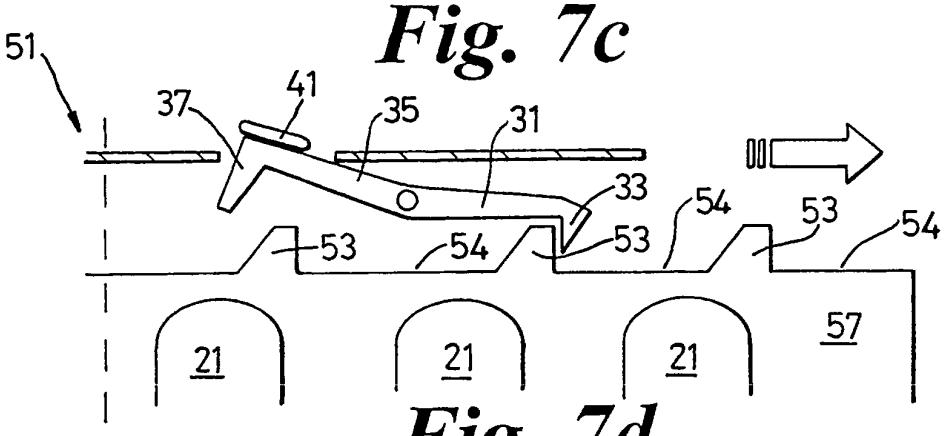

Fig. 7d

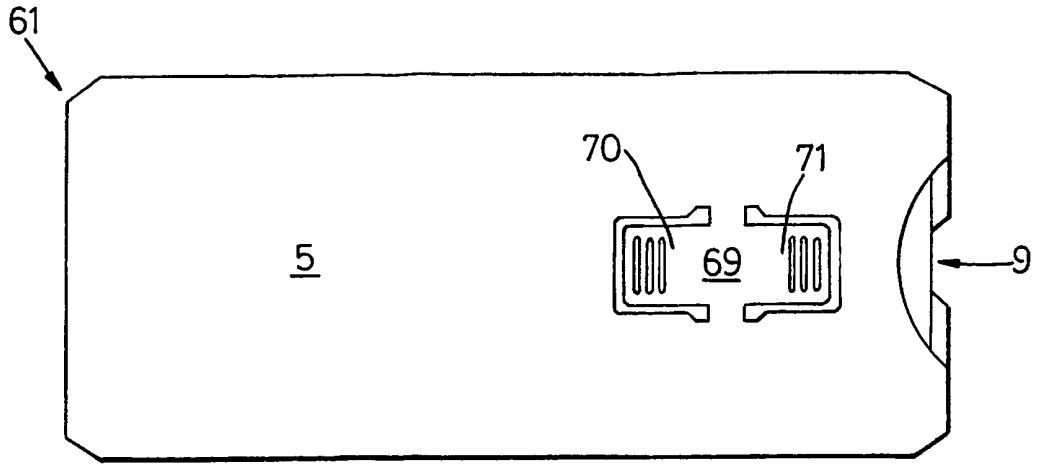

Fig. 8

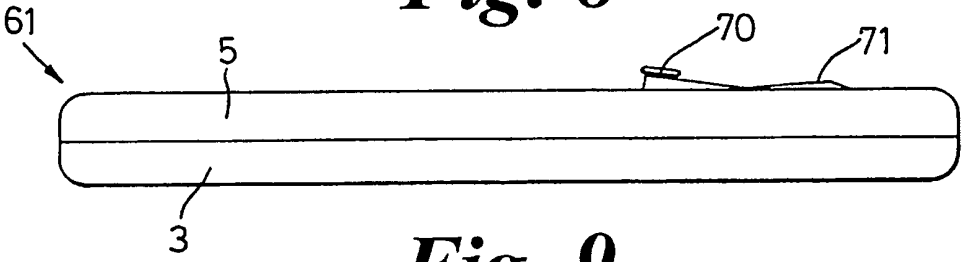

Fig. 9

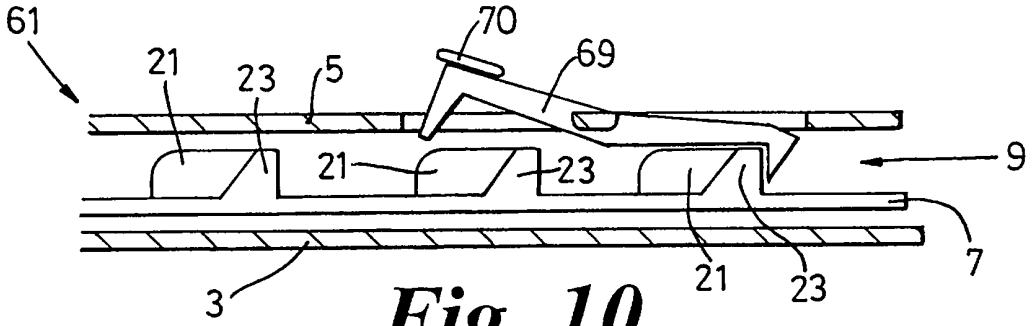

Fig. 10

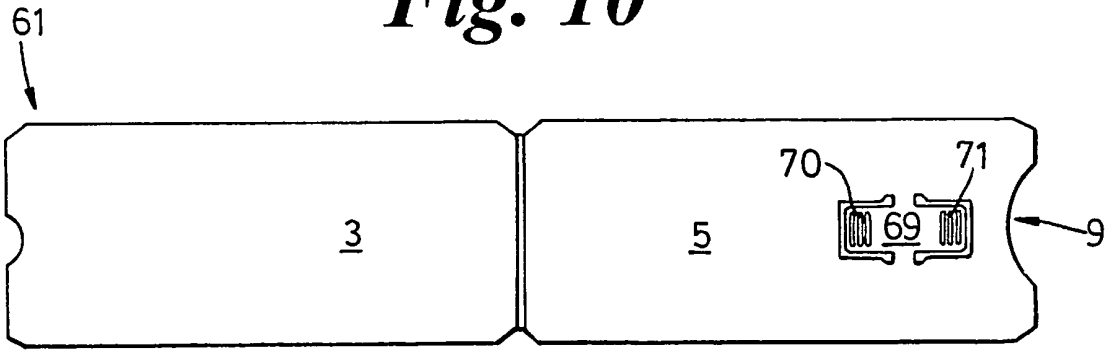

Fig. 11